STATUS OF AMBIENT NOISE POLLUTION DURING DEEPAWALI IN INDIA

MARCH, 2015

CENTRAL POLLUTION CONTROL BOARD

(Ministry of Environment and Forests, Govt. of India)

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FOREWORD

Deepawali is certainly the biggest and the brightest festivals of India. It's the festival of lights. Burning of firecrackers is the major concern and questions on the environmental and health impact. The high decibel noise of firecrackers triggers the problems like annoyance, hypertension, stress, hearing loss, and sleep disturbances. Under the Environment (Protection) Act, 1986 Noise Pollution (Regulation and Control) Rules, 2000 notified by Ministry of Environment & Forests was last amended in January 2010.

Central Pollution Control Board has laid down Real Time National Ambient Noise Monitoring Network, 2011 covering seven cities (Delhi, Lucknow, Chennai, Mumbai, Kolkata, Hyderabad and Bangalore). This document provides status of real time noise monitoring during pre-deepawali and Deepawali period. It also includes information on instrumentation involved in its implementation relating to noise measurement and its impact on human health.

The information has been collated by Sh. Vishal Gandhi, Scientist 'C', Sh. Jagdeep Kumar, SA-I, and Sh. J K Vimal, SRF under the guidance of Sh. A K Sinha Scientist 'D' and Sh. R M Bhardwaj, Scientist 'E' deserves appreciation. Hopefully, this document will be useful to all concerned in the field of noise control.

18/3/15

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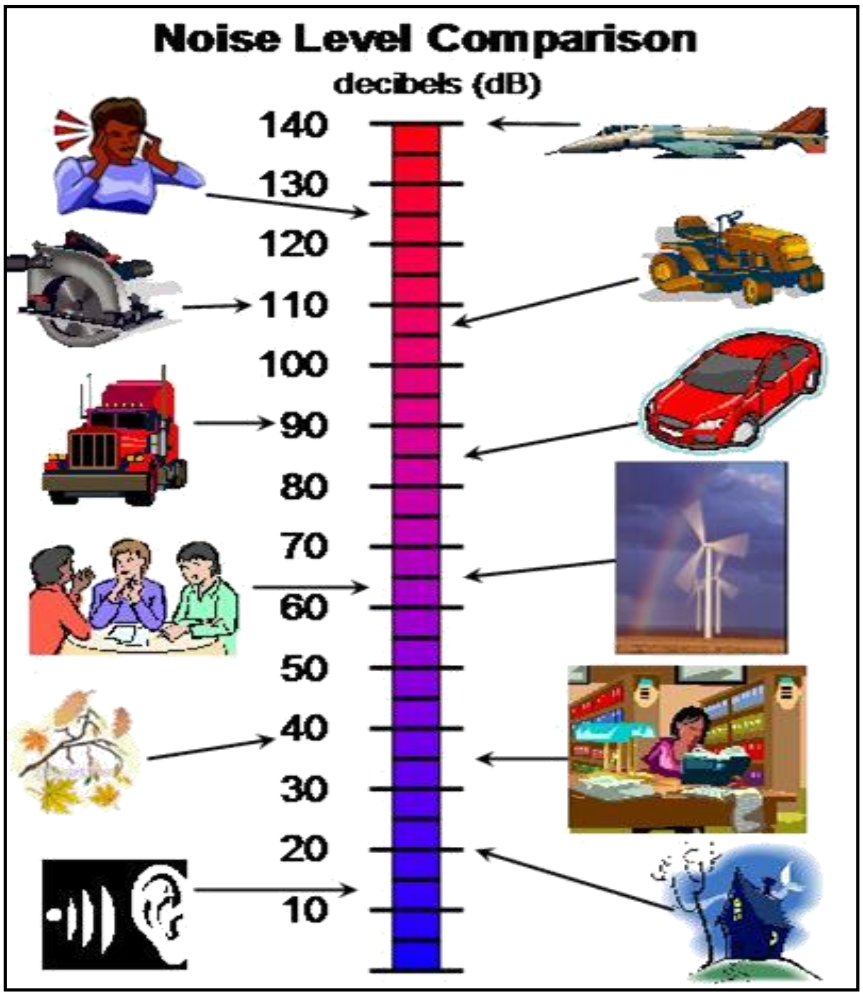
1. INTRODUCTION

1.1 BACKGROUND

Deepawali is certainly the biggest and the brightest festivals of India. It's the festival of lights. Deepawali is derived from the Sanskrit fusion word *Dīpāvali*, formed from *dīpa* (दीप, "light" or "lamp") and *āvalī*(आवली, "series, line, row"). *Dīpāvali* or *Deepavali* thus meant a "row" or "series of lights"). The celebration includes shining of lights on housetops, outside doors and windows, around temples and other buildings in the communities. The illumination of homes observed with lights and the skies with firecrackers. Diwali marks a major shopping period in India. It is traditionally a time when households purchase new clothing, home refurbishments, gifts, gold and other large purchases. It is also a major sweets and fireworks buying season. At retail level, about US$800 million (INR 5,000 crores) worth of firecrackers are consumed in India over the Diwali season. Burning of firecrackers is the major concern and questions on the environmental and health impact. Noise pollution, air pollution and burn injuries from fireworks are three most studied issues. The high decibel noise of firecrackers triggers the problems like annoyance, hypertension, stress, hearing loss, and sleep disturbances.

1.2 SOUND AND NOISE POLLUTION

Sound is such a common part of everyday life that we rarely appreciate all of its functions. It provides enjoy-able experiences such as listening to music or to the singing of birds. It can alert or warn us – for example with the ringing of a telephone, or a wailing siren. Sound can be heard underwater too, just as in air. Whales are familiar with this and communicate with one another. Dolphins too have complex system of communication.



A sound source radiates power and this result in a sound pressure. Sound power is the cause. Sound pressure is the effect. An electric heater radiates heat into a room and temperature is the effect. Temperature is also the physical quantity that makes us feel hot or cold. The temperature in the room is obviously dependent on the room itself, the insulation, and whether other sources of heat are present. The relationship between sound power and sound pressure is similar. What we hear is sound pressure but it is caused by the sound power emitted from the source. The sound pressure that we hear, or measure with a microphone is dependent on the distance from the source and acoustic environment (or sound field) in which sound waves are present. This is in turn depends on the size of the room and the sound absorption of the surfaces. Sound may be defined as any pressure variation (in air, water or other medium) that human ear can detect. If variation in atmospheric pressure occur more rapidly i.e at least 20 times a second, then it can be heard and hence are called sound. Sound travels as small waves of pressure through air at a speed of about 740 miles per hour and what we hear are sound waves provided by vibrations of air molecules.

The word "noise" descends from the Latin word "nausea," meaning seasickness, or, more generally, any similar sensation of disgust, annoyance, or discomfort.

Noise is usually defined as unwanted sound pollutant which produces undesirable physiological and psychological effects in an individual, by interfering with one's social activities like work, rest, recreation, sleep etc. A sound might be unwanted because it is:

- Loud
- Unpleasant or annoying
- Intrusive or distracting

Usually the sound of a violin is referred to as music - is something pleasing. Depending on other factors, the sound may be perceived as noise.

Noise perception is subjective. Factors such as the magnitude, characteristics, duration, and time of occurrence may affect one's subjective impression of the noise. Noise is also considered a mixture of many different sound frequencies at high decibel levels.

Noise pollution refers to sounds in the environment that are caused by humans and that threaten the health or welfare of human or animal inhabitants.

The most common source of noise pollution by far, the one that affects the most people on the planet, is motor vehicles. Aircraft and industrial machinery are also major sources. Additional noise pollution is contributed by office machines, sirens, power tools, and other equipment.

The response of ear to sound is very dependent on the frequency content of the sound. The ear has a peak response around 2.5 – 3 kHz and has a relatively low response at low frequencies.

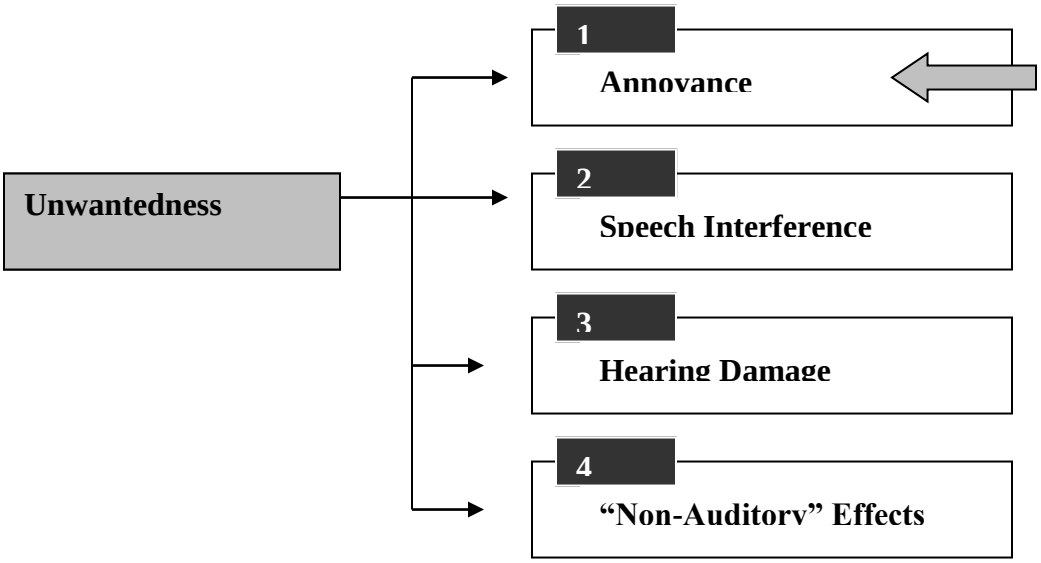
2. EFFECTS OF NOISE

Noise health effects are both health and behavioral in nature. The unwanted sound is called noise. This unwanted sound can damage physiological and psychological health. Noise pollution can cause annoyance and aggression, hypertension, high stress levels, tinnitus, hearing loss, sleep disturbances, and other harmful effects. Furthermore, stress and hypertension are the leading causes to health problems, whereas tinnitus can lead to forgetfulness, severe depression and at times panic attacks.

High noise levels can contribute to cardiovascular effects and exposure to moderately high levels during a single eight hour period causes a statistical rise in blood pressure of five to ten points and an increase in stress.

Noise health effects are the health consequences of elevated sound levels. Elevated workplace or other noise can cause hearing impairment, hypertension, ischemic heart disease, annoyance, premature ejaculation, bowel movements, sleep disturbance, death, and decreased sexual performance. Changes in the immune system and birth defects have been attributed to noise exposure, but evidence is limited. Beyond these effects, elevated noise levels can create stress, increase workplace accident rates, and stimulate aggression and other anti-social behaviors. The most significant causes are vehicle and aircraft noise, prolonged exposure to loud music, and industrial noise.

Noise =Unwanted Sound



Hearing Damage:

- Well established effect, caused by prolonged exposure to intense sounds.
- Impairs ability to understand speech.
- Permanent and irreversible, even with hearing aids.

In general, a noise impact to wildlife can be determined by the degree to which the noise disrupts a functioning ecosystem. Noise has the potential to affect wildlife in a variety of ways, varying between different types of animals. Research shows that the degree of reaction to noise often varies with age, sex, season, situation, previous exposure to noise (habituation), noise level, and frequency spectrum. Potential noise effects on wildlife include; auditory damage, physiological changes, and behavioral alterations. These effects are further characterized into primary and secondary effects. Primary effects are direct physical effects to

the animal. Secondary effects are indirect changes which occur between the animal and its environment.

Type of Effect	Primary	Secondary
Auditory	Hearing Loss	Change in Predator-Prey relationships
	Threshold Shift	Mating Interference
Physiological	Stress	Reduced Reproductive Capacity
	Metabolic Change	Weakened Immune System
	Hormonal Change	Reduction in Functioning
Behavioral	Signal Masking	Change in Predator-Prey relationships
	Avoidance Behavior	Population Reduction
		Migration and Loss of Habitat
		Mating Interference

Physiological Effects - Physiological effects, such as metabolic and hormonal changes, are often associated with stress. Stress in wildlife in their natural setting is typically a difficult response to quantify. For wildlife, stress reactions are part of survival and a routine occurrence. Stress reactions involve what is commonly referred to as the "fight or flight" response. When this reaction is inappropriate, such as fleeing from a non-threaten noise, impacts begin to occur. Inappropriate reactions unnecessarily deplete an animal's energy resources which can increase susceptibility to predators, disease, and starvation.

Behavioral Effects - Changes in normal behavioral patterns are the most apparent effects of noise on wildlife. When noise becomes an objectionable intrusion on wildlife habitats, these changes include alterations in habitat locations and migration patterns, and abnormal behavior that can cause difficulty in mating and survival.

3. OBJECTIVE OF NOISE MONITORING

In order to assess the sound level on occasion of Deepawali festival, noise monitoring was carried out at 35 locations in 07 metropolitan cities (Mumbai, Delhi, Kolkata, Chennai, Bangalore, Lucknow and Hyderabad (five stations in each)). The Real Time data of pre & post Deepawali was assessed for the period 15th October, 2014 to 30th of October, 2014. The continuous monitoring was conducted at locations mentioned in table 1.

Table – 1 Detail of monitoringlocations as below

City	Monitoring Point	Category
Delhi	Dilshad Garden	Silence
	CPCB	Commercial
	DCE	Silence
	ITO	Commercial
	NSIT	Silence

City	Monitoring Point	Category
Bangalore	Parisar Bhawan	Commercial
	Peenya	Industrial
	Nisarga bhawan	Residential
	Marathali	Commercial
	BTM	Residential
Chennai	Eye Hosp.	Silence
	T. Nagar	Commercial
	Perambur	Commercial
	Guindy	Industrial
	Triplicane	Residential
Hyderabad	Abids	Commercial
	Punjagutta	Commercial
	Jeedimetla	Industrial
	Zoo	Silence
	Julee Hills	Residential
Kolkata	SSKM Hosp.	Silence
	Gole Park	Industrial
	WBPCB HQ	Commercial
	Patauli	Residential
	New Market	Commercial
Lucknow	Talkatora	Industrial
	Hazrat ganj	Commercial
	P.G.I.	Silence
	Indira Nagar	Residential
	Gomti nagar	Silence
Mumbai	Thane	Commercial
	Vashi Hsp.	Silence
	Ashp	Silence
	Bandra	Commercial
	MPCB HQ	Commercial

The sound level data fetched from Real time Noise Monitoring Station was compared with pre-deepawali data and with Ambient Noise Standards. The extent of violation with respect to prescribed standards was also assessed. The main objective is to find collective significant factor and its collective impacts as to help the concern authorities and planners for decision making at pro-active stage. The status of noise pollution be communicated and placed in public domain for mass awareness.

4. METHODOLOGY

4.1 MEASURING SOUND LEVELS

Sound produced from any source is stimuli and it can be measured as sound pressure. The sound pressure range varies from 20µPa- 200 Pa and it can be expressed on a scale based on

the log of the ratio of measured sound pressure and a reference standard pressure Sound Level,

$$L = \text{Log}_{10}\frac{P}{Po}\ (\text{bels})$$

P= Measured quantity of sound pressure or sound power, or sound intensity.

Po=Reference standard quantity of sound pressure, or sound power, or sound intensity (20×10^{-6} Pa)

L= Sound Level in Bels (B)

However, above unit bels (B) is turn out to be a rather large unit, a smaller unit of decibels (dB) is generally used.

$$L = 10.\text{Log}_{10}\frac{P}{Po}\ (\text{dB})$$

* $1\text{dB} = \frac{1}{10}$ B

Sound Pressure Level,

$$Lp = 20.\text{Log}_{10}\left(\frac{Pr.m.s}{20\mu Pa}\right)$$

The logarithmic unit of measurement means, for example. that 80dB is 10 times louder than 79dB. This is one of the motivations for using the decibel scale to measure sound intensity.

4.2 NOISE RATING SYSTEM

Leq:- Leq is that statistical value of sound pressure level that can be equated to any fluctuating noise level. For e.g. a sound of 40 dB last for 5 min, for the next 10 min sound is 85 dB and then followed by a sound of 100 dB for next 5 min, will compose a fluctuating noise level, which is indicative of producing the same effect over the entire time period of 5+10+5= 20 minutes in dB. This value is called Equivalent continuous equal energy level, Leq.

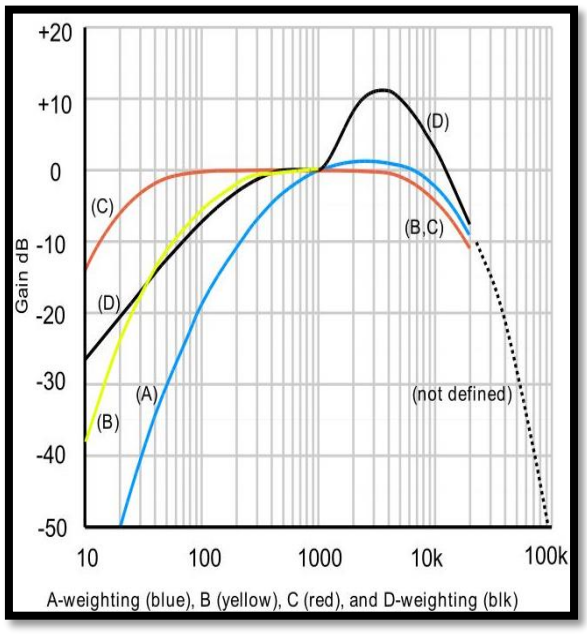
$$Leq = 10 \log \sum_{i=1}^{i=n} (10)^{\frac{Li}{10}} \times \frac{ti}{tt}$$

n= number of sound samples,

Li=The noise level of any i^{th} sample,

ti= time duration of i^{th} sample,

tt= total time period of event.



Leq is also defined as the constant noise level, which over a given time, expands the same amount of energy, as is expanding by the fluctuating levels over the same time.

A sound level meter that measures the sound pressure level with a "flat" response will indicate the strength of low frequency sound

with the same emphasis as higher frequency sounds.

Therefore, sound meter is equipped with frequency-weighting filter.

The human ear does not respond uniformly to sounds of all frequencies being less efficient to low and high frequencies as compared to medium range frequencies. In order to obtain sound level which cover wide range of frequencies and conforms approximately to the response of the human ear, frequency weighting filter is used. Resultant sound level obtained is A-weighted sound.

Therefore, we measure sound level as Leq dB(A).

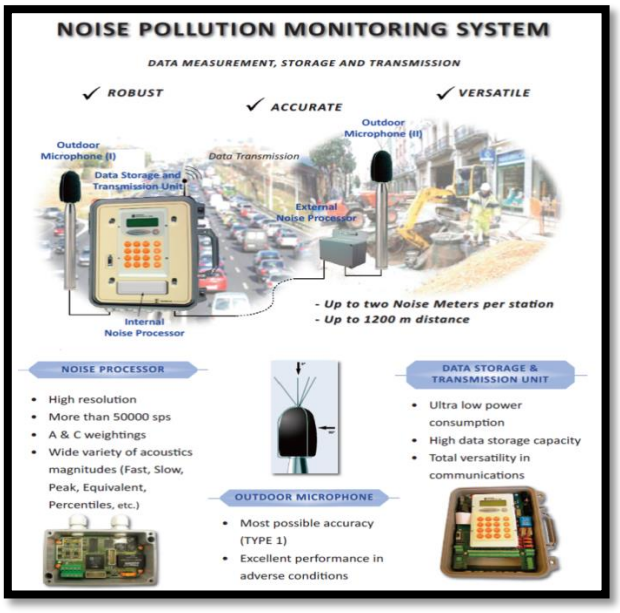
Ln: The Ln is a statistical measure indicating how frequently a particular Sound level is exceeded. The value of Ln will represent the sound pressure level that will exceed for N% of the gauging time. For e.g. L_{60} over entire period is 70 dB and this 70 dB shows that the sound level will exceed 70 dB for 60 % of the measuring time. Ln is nothing but percentile value over the measuring time.

4.3 INSTRUMENTATION

Sound Level Meter is an instrument designed to respond in approximately the same way as the human ear and to give objective, reproducible measurements of sound pressure level. Sound level meter consist of a microphone, a processing section and read-out unit.

The microphone converts the sound signal to an equivalent electrical signal. There are many type of microphone like condenser microphone, electrets condenser, dynamic microphone, carbon microphone, piezoelectric microphone, fiber optic microphone, which is used for various purposes. The most suitable type of microphone for sound level meters is the condenser microphone, which combines precision with stability and reliability. The electrical signal produced by the microphone is quite small and so it is amplified by a preamplifier before being processed.

Noise Monitoring System (NMS) is used for measuring real time noise since large number of stations can be managed easily using this technology. It comprises of microphone, data logger and mounting stand. The details of system are mentioned in subsequent section.



4.3.1 NOISE MONITORING SYSTEM

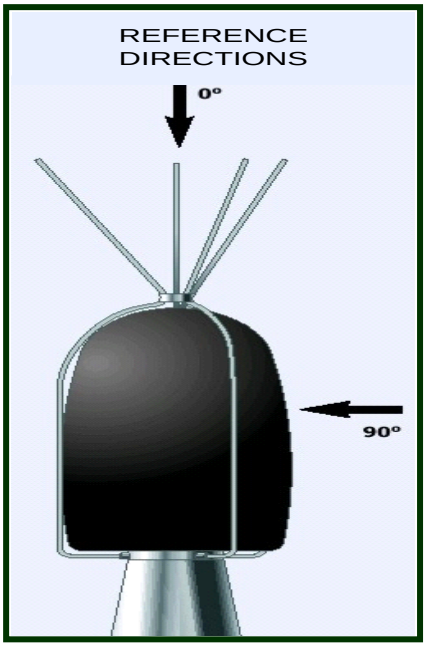
Noise Monitoring System (NMS) is used for measuring real time noise since large number of stations can be managed easily using this technology. NMSs are optimized for outdoor use with small, custom designed enclosure, and also designed for use in all climatic environments. NMS consist of a

weatherproof cabinet containing a noise level analyzer and a battery, a communication device for transmitting data to receiving station, a back plate and an outdoor microphone (for measuring sound) all of which can be mounted on a mast. Some of the features and particulars of NMS are mentioned as follows:

- NMSs are modular both in hardware and software.
- The NMS has been specifically designed to operate unattended in hospitable environments protecting the contents from weather, tampering, vandalism etc. The robust, durable, weatherproof cabinet includes a kit for fastening the cabinet to a wall or pole.
- Protection is also provided for the cabling, to reduce the risk of tampering or accidental damage
- The NMS includes one battery, but up to two batteries can be used so that the NMS can function when there is no usable local power source or mains power has been disrupted. The batteries are charged whenever external AC or DC is applied to the NMS.
- The NMS can be powered from a variety of sources, such as solar panels, connected through the DC supply input.
- Data Retrieval with automatic and manual operation and data storage in a SQL database, in order to allow the users to carry out their data analysis and data processing.
- The NMS supports GPS, so that with a standard commercial GPS receiver and antenna unit, longitude, latitude and height can be monitored and stored in the NMS with the noise measurements.
- Data from NMS is directly transferred to main server (Central Receiving Station) via GPRS.

4.3.2 OUTDOOR MICROPHONE

The outdoor microphone is a major factor in ensuring that the NMT complies with IEC 61672 Class 1 requirements, with either 0 and 90° reference direction. For permanent outdoor installation, in community such as noise or traffic noise monitoring systems, it has built-in weighting, ±20 dB amplifier (for shifting the dynamic range of up or down by 20 dB) and electrostatic actuator for complete check of system functionality. The microphone is used for permanent outdoor installation and for community noise or traffic noise monitoring systems. It has electrostatic actuator for complete check of system functionality for excellent performance in adverse conditions



It has protectors for;

- Foam cover against wind and dust protection
- Birds protector

- Humidity protector

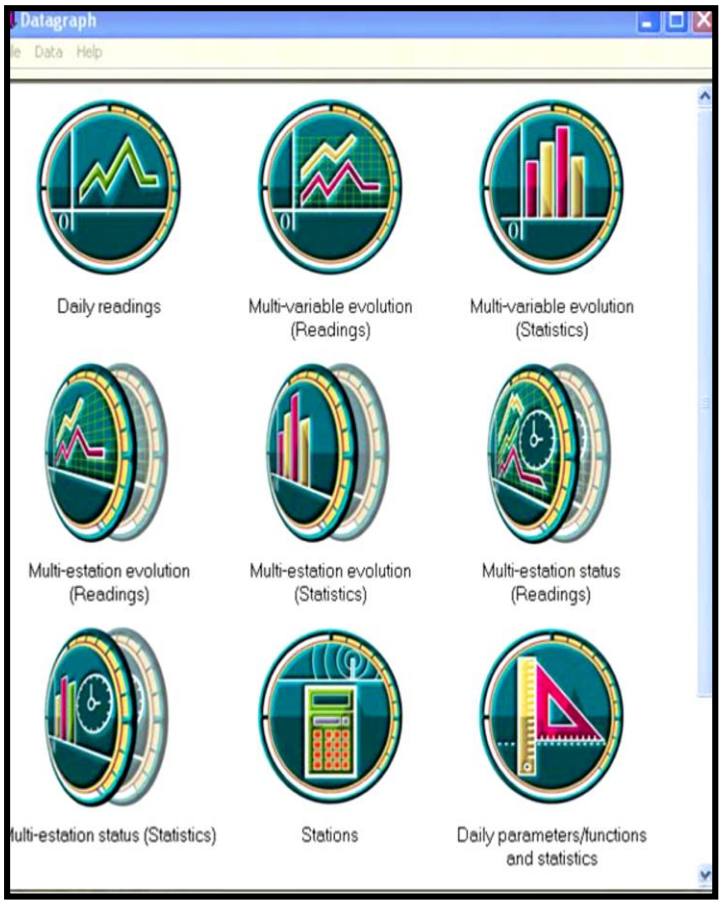
4.3.3 NOISE PROCESSOR AND DATA LOGGER

High quality microphone connected to an advanced acquisition signal processing unit, completed with an electronic measurement and processed-data storage unit, provided as well with an integrated GPRS modem. It allows the connection of one Outdoor Microphone Model 41CN. The Noise Processor 2000NP receives and digitizes, the output signal generated by the microphone, performing "A" and "C" weighting. The system computes acoustic parameters "A" and "C" weighting (Fast and Slow).

Remote Automatic Data Acquisition and Transmission Unit, tele-programmable; total compact is mounted in a heavy duty Weatherproof Polypropylene housing with IP-67 protection.

4.3.4 CENTRAL RECEIVING STATION

The Central receiving station gets data from all remote stations through GPRS mode, processes the Noise data and generates different reports. The central station software allows CPCB officials for research, development, and analysis of the noise data. The data from the Remote unit can be displayed through Internet to the authorize addresses. The central receiving station comprises hot redundant servers including web hosting server and software for analysis and other purpose. The High-end dual servers have been used for data reception, processing, visualization, communication and archiving. The servers are hot redundant mode to insure that under no condition data reception process fails as in the event of failure of main server the alternate hot redundant servers takes over the entire process automatically within milliseconds.



Software package is capable for communication, from measuring and acquisition stations, both locally and remotely via a PC. It is intuitive and easy to use application which runs on Windows. Data Retrieval in real time or by command with automatic and/or manual operation and data storage in a Microsoft Access database, or alternatively in a SQL database, in order to allow

and carry out the data analysis and data processing.

Software is capable for requesting, downloading, editing, processing and representation and management of data. The software integrates the entire data request commands made to the stations in real time data or data saved in the memory. Software allows the user to change and/or modify the configuration of the stations, enables to perform tasks such as date and time synchronisation with the computer and adds new measuring channels specifying the different sampling and storage periods, as well as the statistical calculations to be stored.

5. AIR ACT, NOISE RULES

Under section 2(a) of Air (Prevention and Control of Pollution) Act, 1981 noise is defined as air pollutant

> "Air pollutant" means any solid, liquid or gaseous substance [(including noise)] present in the atmosphere in such concentration as may be or tend to be injurious to human beings or other living creatures or plants or property or environment."

Increasing ambient noise level in public places from various sources, inter-alia, industry activity, construction activity, generators sets, loud speakers, public address systems, music systems, vehicular horns and other mechanical devices have deleterious effects on human health and the psychological well being of the people. Therefore, it is considered necessary to regulate and control of noise producing and generating sources with the objective of maintaining the ambient air quality standards in respect of noise.

Central Government notified the Noise Pollution (Regulation and Control) Rules, 2000 as it is published in the Gazette of India, Extraordinary, Part-II –section 3(ii), vide S.O 123 (E) dated 14.2.2000. In reference to above mentioned rules following responsibilities are vested with State Governments, District Magistrate, Police Commissioner, or any other officer not below the rank of Deputy Superintendent of Police:

1. Enforcement of Noise Pollution control measures and the due compliance of ambient air quality standards in respect of noise.
2. Restriction on the use of Loud Speakers/Public Address system.
3. Restriction on the use of Horns, Sound emitting construction equipment and bursting of Fire crackers.
4. Prohibition of continuance Music Sound or Noise.
5. Authority shall act on the complaint and take action against the violator in accordance with the provisions of rules.
6. Disallowing sound producing instrument after 10 p.m to 6 a.m except in closed premises.
7. State Government may permit loud speakers or public address system in night hours (between 10.00 p.m. to 12.00 midnight not exceeding 15 days in year.

Area Code	Category of Area / Zone	Limit in dB(A) Leq*	
		Day Time	Night Time
A	Industrial Area	75	70
B	Commercial Area	65	55
C	Residential Area	55	45
D	Silence Zone	50	40

Ambient Air Quality Standards in Respect of Noise is notified under Noise Pollution (Regulation and Control) Rules, 2000.

Note:

1. **Day time shall mean from 6 AM to 10 PM**
2. **Night time shall mean from 10 PM to 6 AM**
3. **Silence Zone is defined as areas up to 100 meters around such premises as hospitals, educational institutes and courts. The Silence Zones are to be declared by competent authority.**
4. **Mixed categories of areas may be declared as one of the four above mentioned categories by the competent authority.**

*dB(A) Leq denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing.
A "decibel" is a unit in which noise is measured.

"A", in dB (A) Leq, denotes the frequency weighting in the measurement of noise and corresponds to frequency response characteristics of the human ear.

Leq: It is energy mean of the noise level over a specific period.

6. RESULTS & OBSERVATIONS

As mentioned earlier, Real Time Ambient Noise Monitoring Stations were installed in 35 locations in 07 metropolitan cities (Mumbai, Delhi, Kolkata, Chennai, Bangalore, Lucknow and Hyderabad (five stations in each)) as shown in figure 1. The stations were installed as per the categorization of Ambient Noise standards (Silence, Residential, Commercial and Industrial). The sound level data of each city was compiled and processed for interpretation.

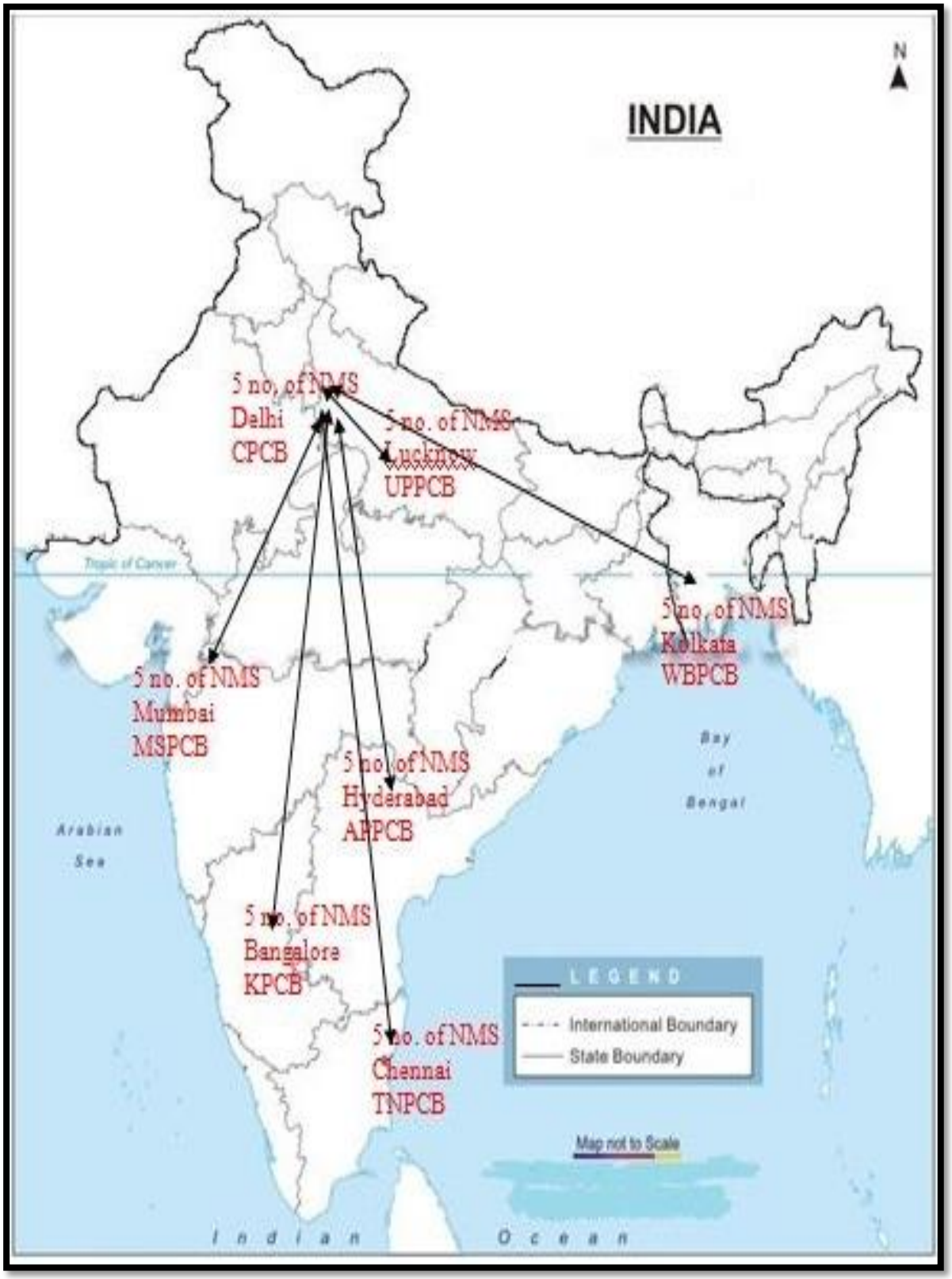


Figure 1: Map depicting monitoring network

6.1 DELHI

Delhi, the capital of India, is located at 28.61°N 77.23°E, and lies in Northern India. It stands on the west bank of Yamuna River bounded by Uttar Pradesh and on the north, west and south by Haryana. Delhi is spread over an area of 1483 sq. kilometers, therefore making it the largest city in terms of area in the country. It has a length of 51.9 km and a width of 48.48 km. Delhi is the fifth most populated area in world has a Current Population of Delhi in 2014 is **17,838,842**as per census-2011. In Delhi, five monitoring stations are installed and details are depicted in table - 2 and figure - 2.

Table 2: Monitoring locations of Delhi

Sl. No.	Station location	Category	Latitude	Longitude
1.	Delhi College of Engineering	Silence Zone	28º44' 44.49" N	77º5' 1.56" E
2.	Netaji Subhas Institute of Technology	Silence Zone	28º36' 14.46" N	77º2' 28.78" E
3.	IHBAS, Dilshad Garden	Silence Zone	28º40' 53.76" N	77º19' 6.2" E
4.	ITO	Commercial	28º37' 41.21" N	77º14' 27.22" E
5.	Central Pollution Control Board	Commercial	28º39' 20.99" N	77º17' 39.91" E

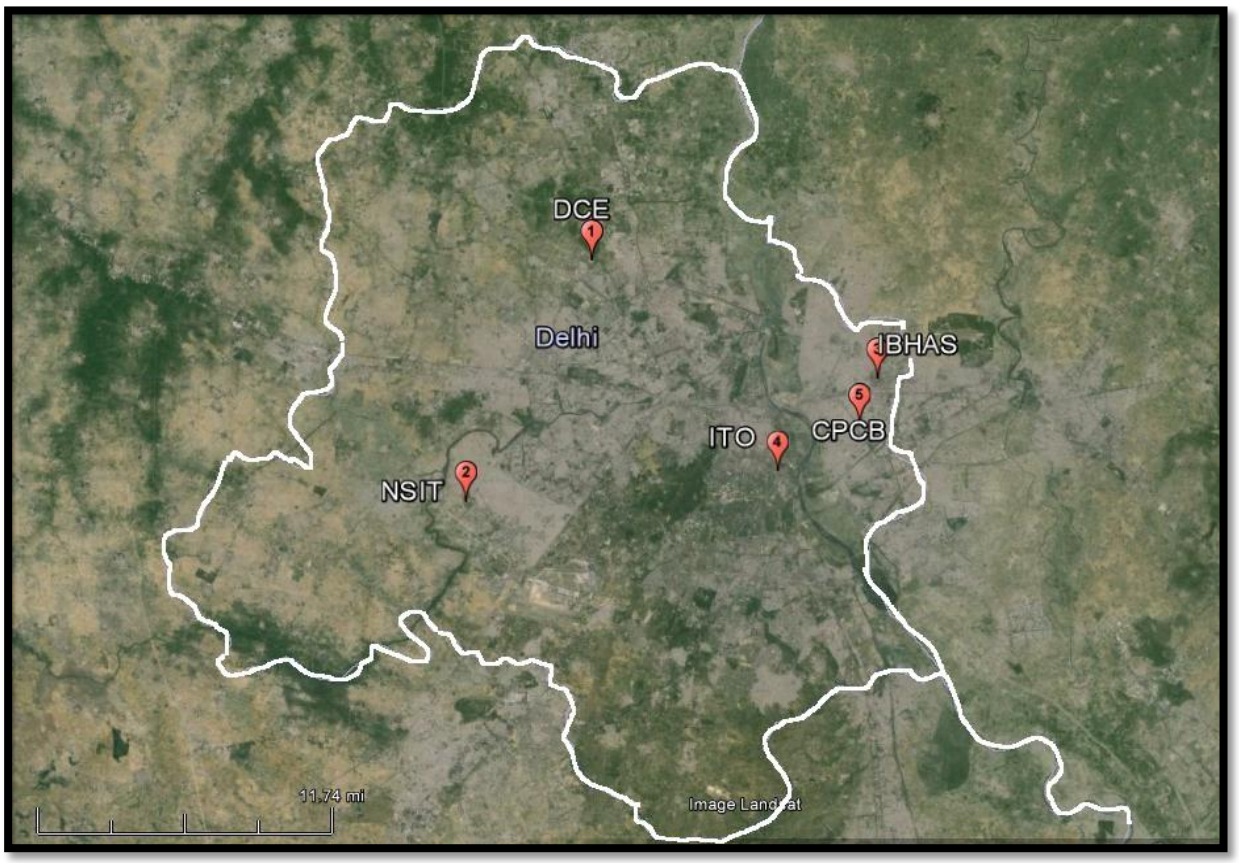


Figure 2: Map shows the monitoring locations of Delhi

6.2 AMBIENT NOISE MONITORING DATA OF DELHI'S STATION

6.2.1 NOISE MONITORING STATION AT IHBAS, DILSHAD GARDEN

The station is installed at Institute of Human Behavior & Allied Sciences (**IHBAS**) and fall under the category of Silence Zone. The GPS coordinate of said site is 28º40' 53.76" N and 77º19' 6.2" E. The ambient noise monitoring data of IHBAS for the period 15/10/2014 to 30/10/2014 is placed in table - 3. Figure - 3 depicts the trend of IHBAS Station for day-night time. Hourly basis data of IHBAS is placed in table -1 of Annexure-I and graphical representation is shown in figure - 4.

Table3: Ambient Noise Level Data of IHBAS

Date	Day Leq. (dB(A)) 6AM to 10PM	Day Min. (dB(A))	Day Max. (dB(A))	Night Leq. (dB(A)) 10PM to 6AM	Night Min. (dB(A))	Night Max. (dB(A))	Prescribed Limit Day dB(A) 6AM to 10PM	Prescribed Limit Day dB(AA) 10PM to 6AM
15-10-2014	50	**44**	60	45	**42**	51	50	40
16-10-2014	50	45	59	45	**42**	48	50	40
17-10-2014	49	45	55	47	43	54	50	40
18-10-2014	49	45	54	49	43	60	50	40
19-10-2014	49	45	55	48	44	54	50	40
20-10-2014	50	46	56	46	43	50	50	40
21-10-2014	67	45	**105**	48	43	59	50	40
22-10-2014	56	49	65	53	46	61	50	40
23-10-2014	65	50	82	67	46	**83**	50	40
24-10-2014	60	50	69	62	46	74	50	40
25-10-2014	56	49	66	52	45	62	50	40
26-10-2014	53	47	61	50	46	61	50	40

27-10-2014	53	47	62	49	46	54	50	40
28-10-2014	52	47	63	50	46	63	50	40
29-10-2014	57	48	67	49	45	56	50	40
30-10-2014	54	49	65	49	46	55	50	40

Close examination to above table reveals following observations:

- Out of 16 days observations, 06 times sound level data exceed the prescribed limit of 50 dB (A) (day time) whereas sound level always above the prescribe limits of 40 dB(A) (night time).
- During day time, sound level data varies from 44 dB(A) (15/10/2014) to 105 dB(A) (21/10/2014) and during night time sound level data ranges from 42 dB(A) (15-16/10/2014) to 83 dB(A) (23/10/2014).
- Hourly basis data revels the maximum sound level of 89 dB(A) at 11.00 AM during Deepawali day whereas minimum sound level was observed at 1.00 AM during 15/10/2014.

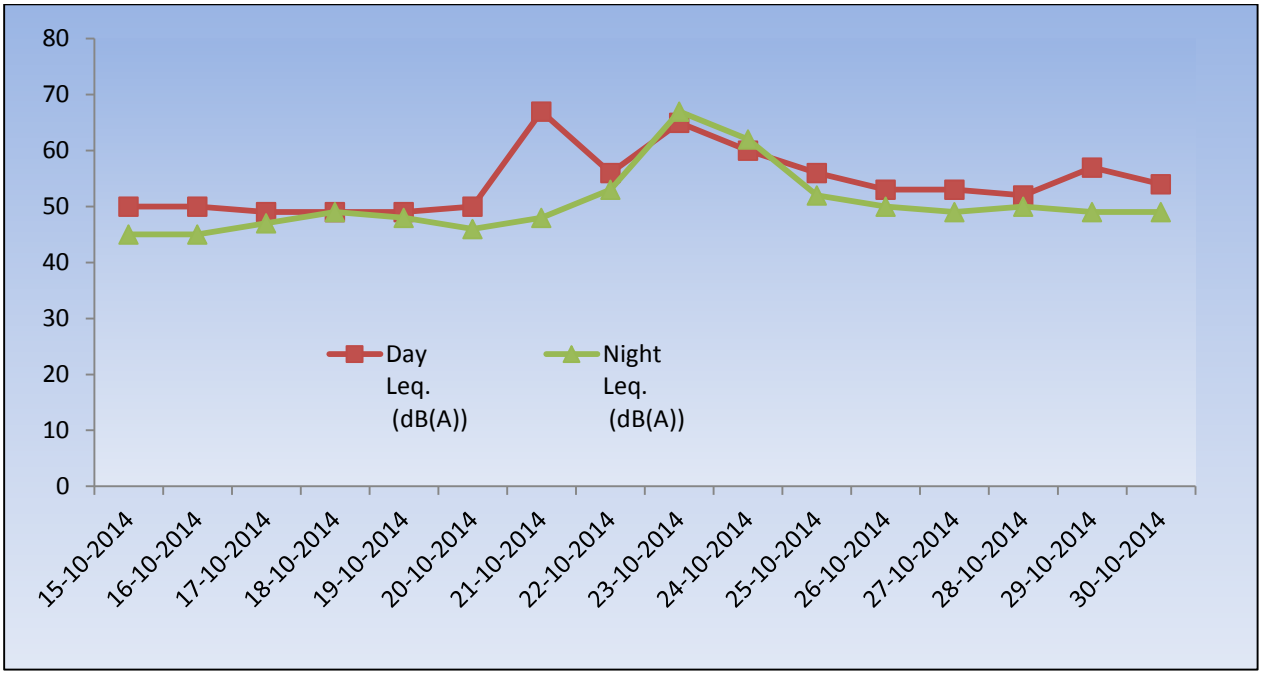


Figure 3: Ambient Noise level trend of IBHAS

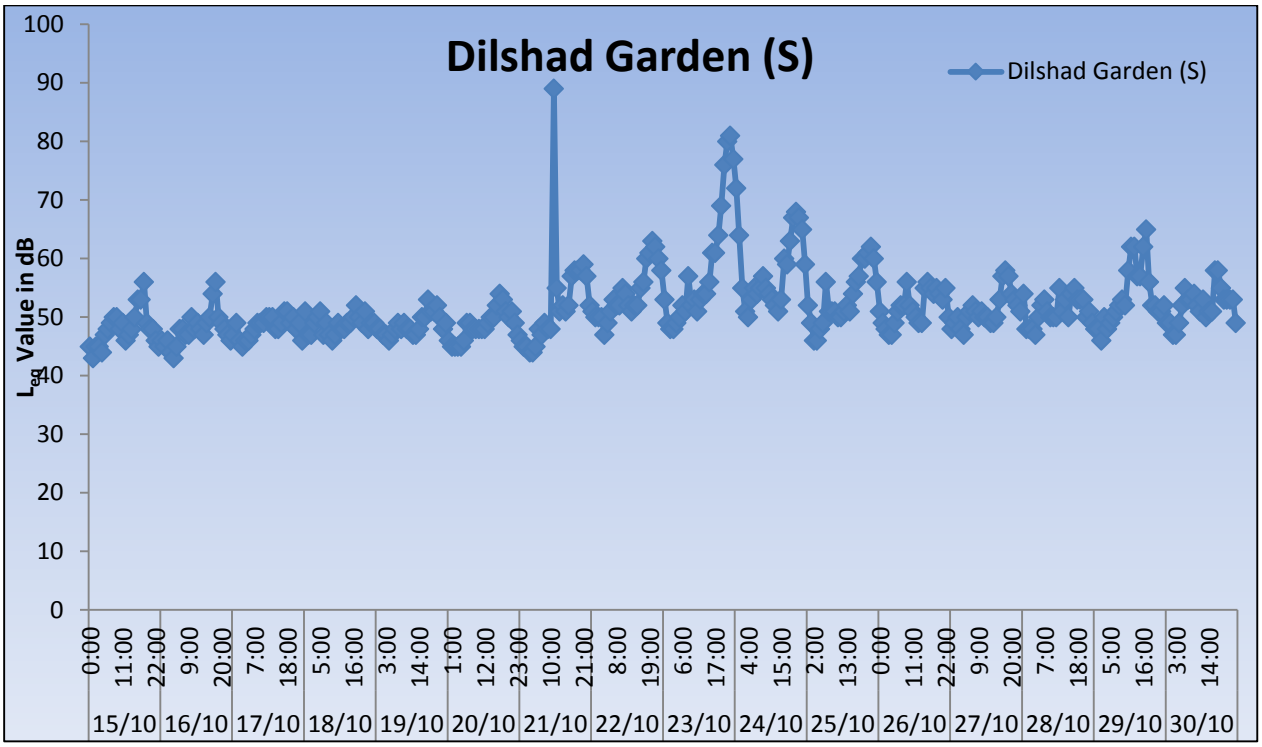


Figure 4: Ambient Noise level trend of IBHAS on hourly basis

6.2.2 NOISE MONITORING STATION AT CPCB

The noise monitoring station is installed in premises of Central Pollution Control Board. The station fall under the category of commercial zone with GPS coordinate 28º39' 20.99" Nand77º17' 39.91" E. The ambient noise monitoring data for the period 15/10/2014 to 30/10/2014 is placed in table - 4. Figure 5 depicts the trend of CPCB Station for day-night time. Hourly basis data of CPCB is placed in table - 1 of Annexure-I and graphical representation is shown in figure - 6.

Table 4: Ambient Noise Level Data of CPCB

Date	Day Leq. (dB(A))	Day Min. (dB(A))	Day Max. (dB(A))	Night Leq. (dB(A))	Night Min. (dB(A))	Night Max. (dB(A))	Limit Day dB(A) 6AM to 10PM	Limit Day dB(AA) 10PM to 6AM
15-10-2014	66	56	70	53	46	63	65	55
16-10-2014	66	56	70	54	46	63	65	55
17-10-2014	66	55	69	55	46	61	65	55
18-10-2014	66	56	69	54	45	62	65	55
19-10-2014	63	54	66	55	48	62	65	55
20-10-2014	66	54	70	56	48	63	65	55
21-10-2014	72	55	**99**	57	46	68	65	55

22-10-2014	69	58	72	62	50	72	65	55
23-10-2014	69	60	82	70	52	**82**	65	55
24-10-2014	67	57	71	66	51	80	65	55
25-10-2014	68	55	73	57	47	66	65	55
26-10-2014	66	**53**	70	57	47	64	65	55
27-10-2014	75	59	99	56	48	64	65	55
28-10-2014	70	59	74	58	49	70	65	55
29-10-2014	68	57	72	56	48	65	65	55
30-10-2014	70	58	74	58	51	66	65	55

Close examination to above table reveals following observations:

- Sound level data of CPCB exceed the prescribed limit of 65 dB (A) (day time) for 15 observation whereas sound level above the prescribe limits of 55 dB(A) (night time) for 11 observations.
- During day time, sound level data varies from 53 dB(A) (26/10/2014) to 99 dB(A) (21/10/2014) and during night time sound level data ranges from 45 dB(A) (18/10/2014) to 82 dB(A) (23/10/2014).
- Hourly basis data revels the maximum sound level of 92 dB(A) at 10.00 AM during 27/10/2014 whereas minimum sound level of 47 dB(A) was observed at 3.00 – 4.00 AM during 15/10/2014.

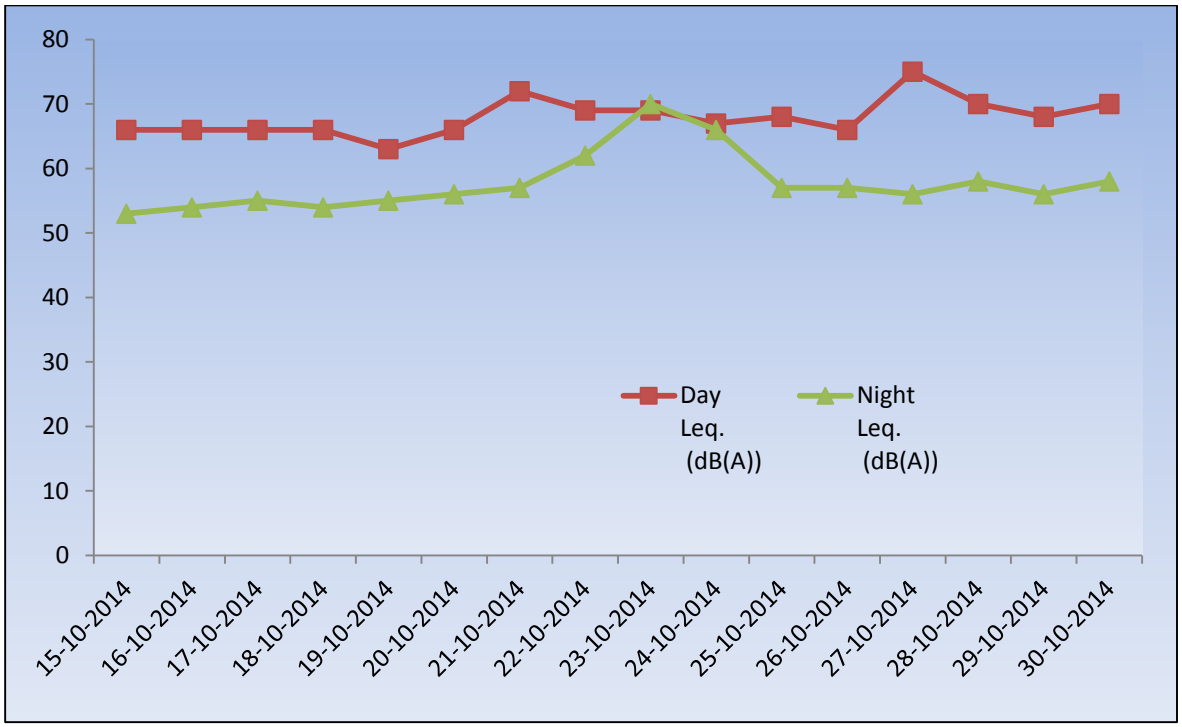


Figure 5: Ambient Noise level trend of CPCB

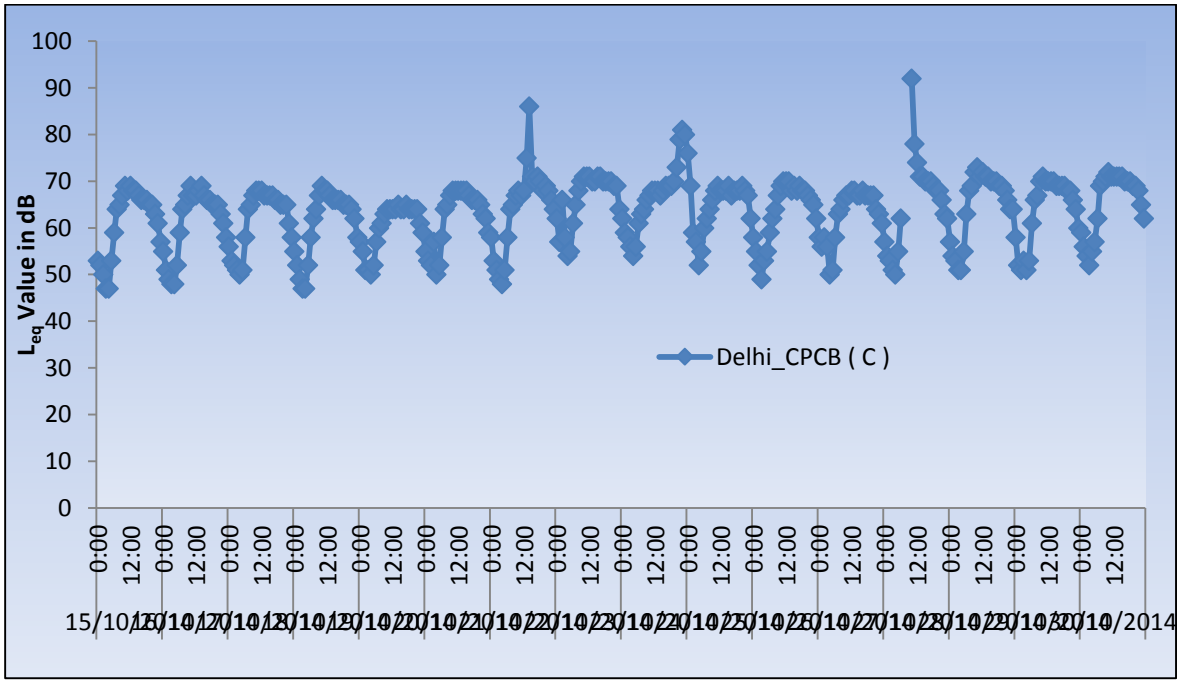


Figure 6: Ambient Noise level trend of CPCB on hourly basis

6.2.3 NOISE MONITORING STATION AT DCE

The noise monitoring station is installed in campus of Delhi Technological University. The station fall under the category of silence zone having GPS coordinate 28º44' 44.49"

N and 77º5' 1.56" E. The ambient noise monitoring data for the period 15/10/2014 to 30/10/2014 is placed in table - 5. Figure -7 show the trend of DCE Station for day-night time. Hourly basis data of DCE is mentioned in table - 1 of Annexure-I and graphical representation is shown in figure - 8.

Table 5: Ambient Noise Level Data of DCE

Date	Day Leq. dB(A))	Day Min. dB(A))	Day Max. dB(A))	Night Leq. (dB(A))	Night Min. (dB(A))	Night Max. (dB(A))	Prescribed limits of day dB(A) 6AM to 10PM	Prescribed limits for Night dB(AA) 10PM to 6AM
15-10-2014	53	**44**	62	46	**40**	54	50	40
16-10-2014	53	**44**	65	44	**40**	47	50	40
17-10-2014	51	45	61	43	41	47	50	40
18-10-2014	49	46	55	44	42	49	50	40
19-10-2014	48	45	57	45	43	48	50	40
20-10-2014	67	46	**105**	47	43	55	50	40
21-10-2014	54	49	61	49	46	55	50	40
22-10-2014	53	49	60	51	46	61	50	40
23-10-2014	60	47	77	63	45	**77**	50	40
24-10-2014	54	47	62	60	47	70	50	40
25-10-2014	52	47	66	48	45	53	50	40
26-10-2014	51	47	56	47	45	52	50	40
27-10-2014	55	48	59	47	45	51	50	40
28-10-2014	54	47	61	46	44	50	50	40
29-10-2014	53	46	60	47	44	57	50	40
30-10-2014	55	47	63	50	46	58	50	40

Close examination to above data reveals following observations:

- At DCE, Sound level data exceed the prescribed limit of 50 dB (A) (day time) for 02 days whereas sound level always above the prescribe limits of 40 dB (A) (night time).
- Sound level data varies from 44 dB(A) (15-16/10/2014) to 105 dB(A) (20/10/2014) for day time and during night time sound level data ranges from 40 dB(A) (15-16/10/2014) to 77 dB(A) (23/10/2014).

- Hourly basis data revels the maximum sound level of 89 dB(A) at 04.00 PM during 20/10/2014 whereas minimum sound level of 42 dB(A) was observed at various occasion.

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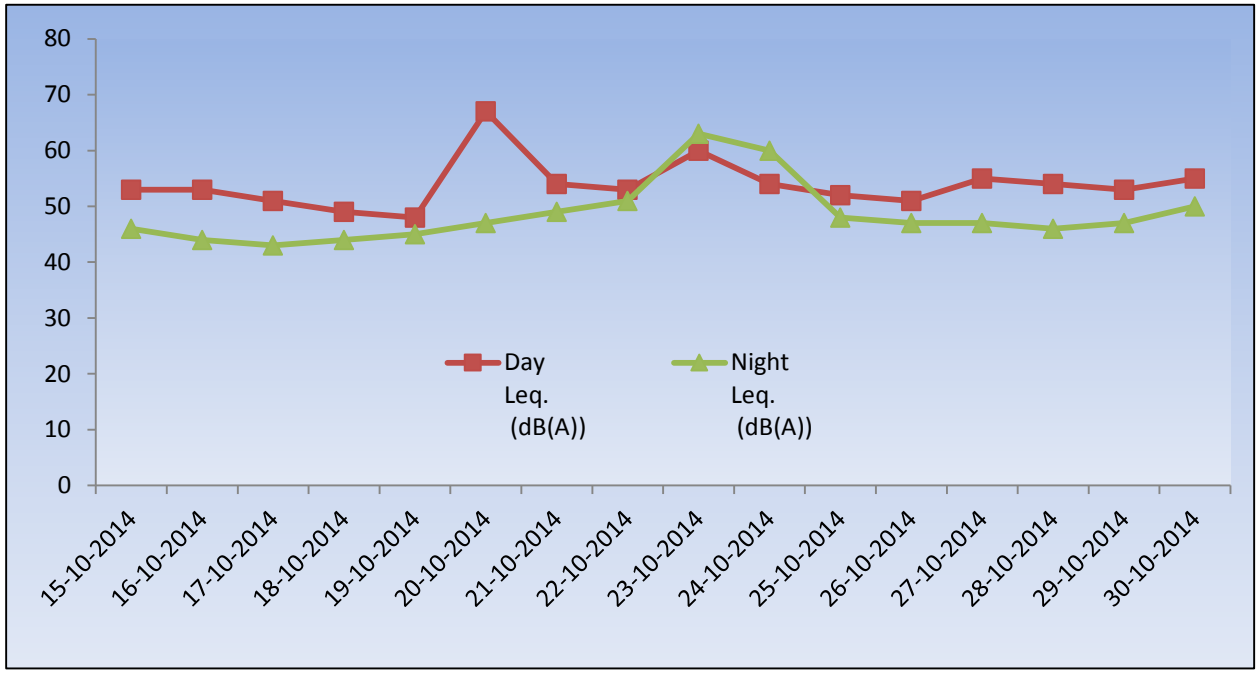

Figure 7: Ambient Noise level trend of DCE

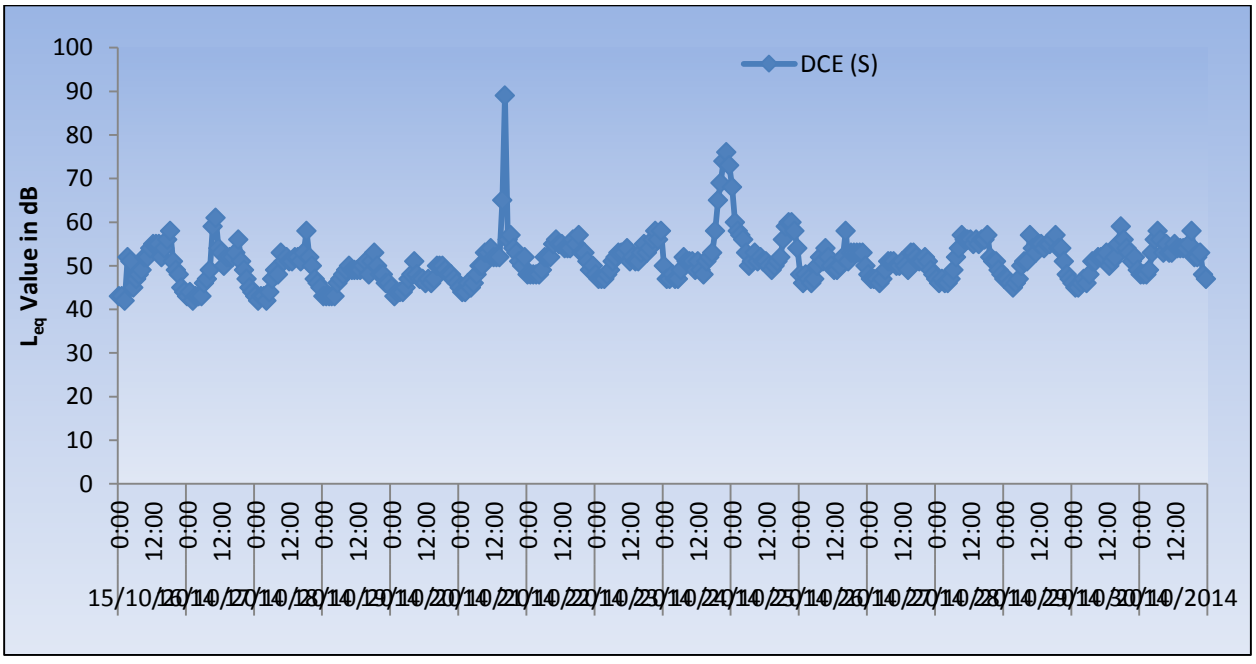

Figure 8: Ambient Noise level trend of DCE on hourly basis

6.2.4 NOISE MONITORING STATION AT ITO

The noise monitoring station is installed at traffic intersection point of ITO. The station fall under the category of commercial zone having prescribed limits of 65 dB(A) for day time and 55 dB (A) for night time. The GPS coordinate 28º37' 41.21" N and 77º14' 27.22" E. The ambient noise monitoring data for the period 15/10/2014 to 30/10/2014 is placed in table - 6. Figure-9 show the trend of ITO Station for day-night time. Hourly basis data of ITO is mentioned in table - 1 of Annexure-I and graphical representation is shown in figure - 10.

Table 6: Ambient Noise Level Data of ITO

Date	Day Leq. dB(A))	Day Min. dB(A))	Day Max. (dB(A))	Night Leq. dB(A))	Night Min. dB(A))	Night Max. (dB(A))	Prescribed limits of day dB(A) 6AM to 10PM	Prescribed limits for Night dB(A) 10PM to 6AM
15-10-2014	73	67	76	69	66	73	65	55
16-10-2014	75	68	76	70	67	76	65	55
17-10-2014	71	68	74	73	66	75	65	55
18-10-2014	74	**66**	76	68	**63**	73	65	55
19-10-2014	75	68	76	71	67	76	65	55
20-10-2014	73	69	76	75	74	76	65	55
21-10-2014	71	68	74	73	66	75	65	55
22-10-2014	79	71	**105**	74	73	77	65	55
23-10-2014	79	74	83	75	70	**82**	65	55
24-10-2014	74	71	79	78	70	79	65	55
25-10-2014	79	72	81	73	67	80	65	55
26-10-2014	76	72	79	78	72	79	65	55
27-10-2014	79	72	81	74	69	80	65	55
28-10-2014	76	72	80	78	73	80	65	55
29-10-2014	79	70	83	74	71	79	65	55
30-10-2014	76	72	79	77	71	79	65	55

Close examination to above data reveals following observations:

- Sound level data at ITO always exceed the prescribed limit of day and night time.
- Sound level data varies from 66 dB (A) (18/10/2014) to 105 dB (A) (22/10/2014) for day time and during night time sound level data ranges from 63 dB (A) (18/10/2014) to 82 dB (A) (23/10/2014).

- Hourly basis data revels the maximum sound level of 93 dB(A) at 10.00 A.M during 22/10/2014 whereas minimum sound level of 65 dB(A) was observed at various occasion.

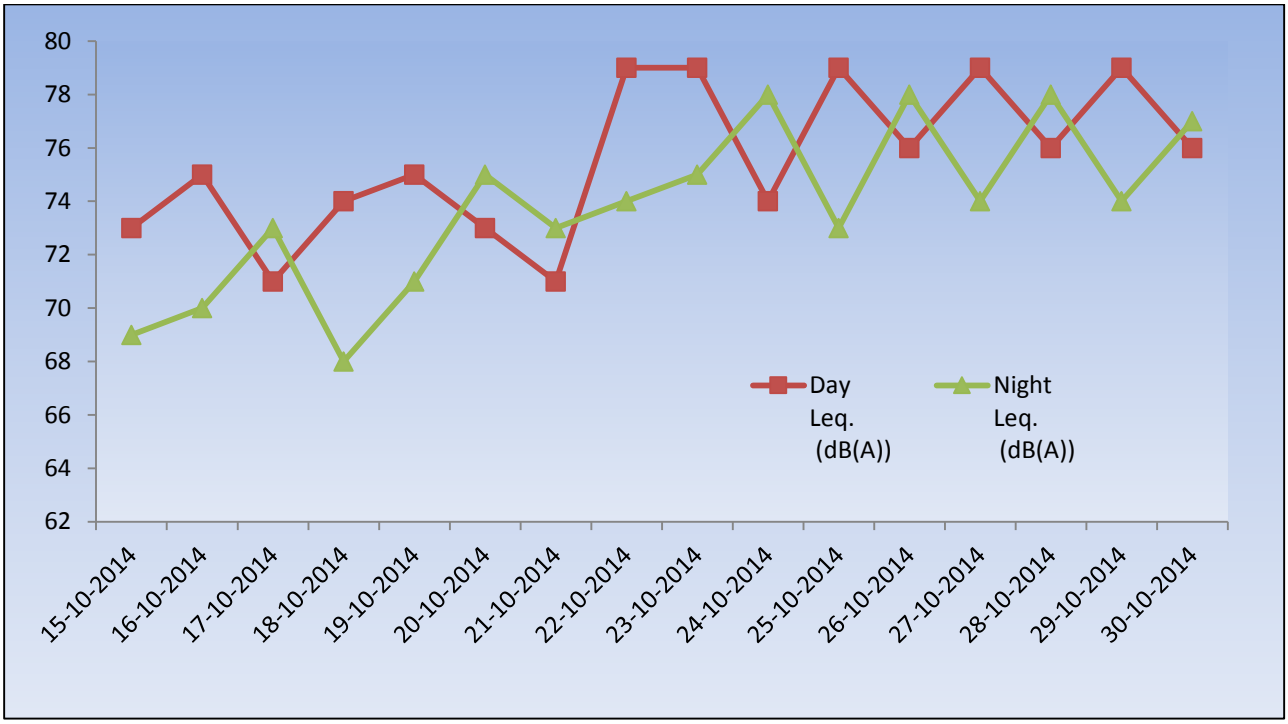

Figure 9: Ambient Noise level trend of ITO

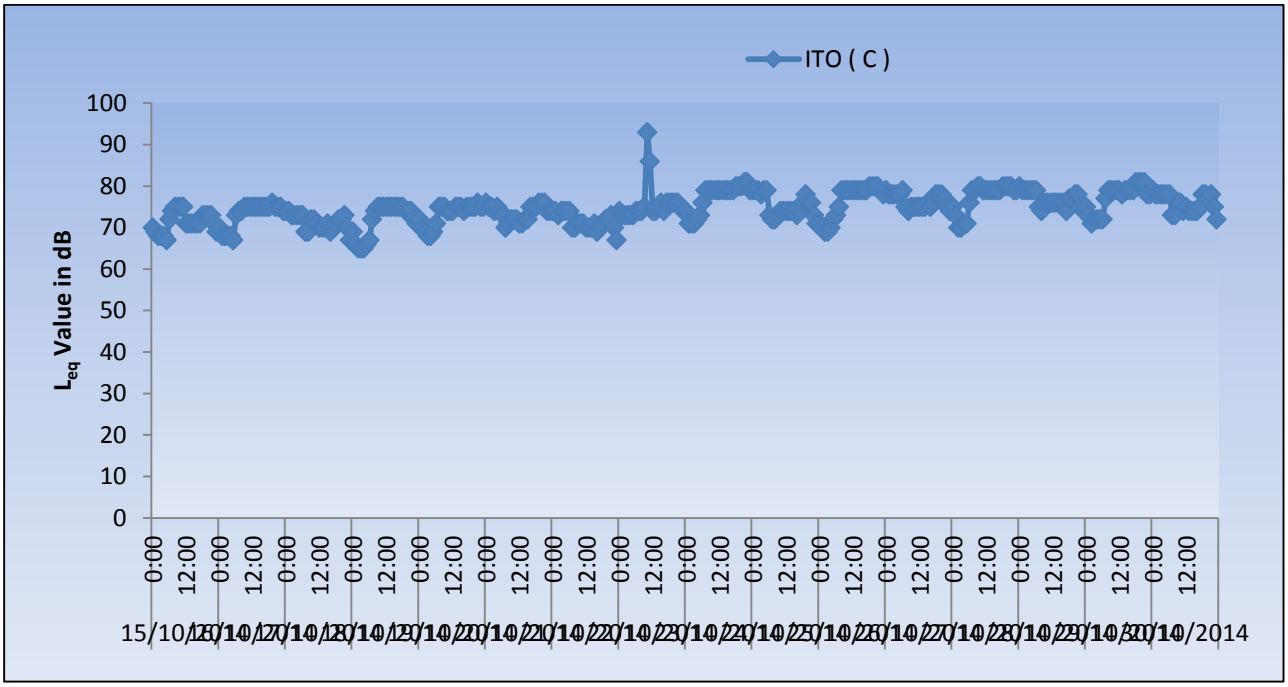

Figure 10: Ambient Noise level trend of ITO on hourly basis

6.2.5 NOISE MONITORING STATION AT NSIT

The noise monitoring station is installed at campus of Netaji Subhas Institute of Technology and station comes into category of silence zone having prescribed limits of 50 dB(A) for day time and 40 dB (A) for night time. The GPS coordinate 28º37' 41.21" N and 77º14' 27.22" E. The ambient noise monitoring data for the period 15/10/2014 to 30/10/2014 is placed in table - 7. Figure-11 show the trend of NSIT Station for day-night time. Hourly basis data of NSIT is mentioned in table - 1 of Annexure-I and graphical representation is shown in figure - 12.

Table 7: Ambient Noise Level Data of NSIT

Date	Day Leq. (dB(A))	Day Min. dB(A))	Day Max. (dB(A))	Night Leq. (dB(A))	Night Min. (dB(A))	Night Max. (dB(A))	Limit Day dB(A) 6AM to 10PM	Limit Day dB(AA) 10PM to 6AM
15-10-2014	55	53	60	55	51	57	50	40
16-10-2014	55	53	58	52	49	54	50	40
17-10-2014	56	53	60	52	48	57	50	40
18-10-2014	56	53	59	53	50	58	50	40
19-10-2014	55	52	60	53	49	57	50	40
20-10-2014	68	54	**104**	55	49	61	50	40
21-10-2014	59	56	64	57	51	63	50	40
22-10-2014	59	56	64	57	54	63	50	40
23-10-2014	63	54	75	63	50	**76**	50	40
24-10-2014	58	**51**	66	56	**46**	67	50	40
25-10-2014	57	54	61	53	49	57	50	40
26-10-2014	57	53	62	53	48	60	50	40
27-10-2014	62	56	77	55	51	59	50	40
28-10-2014	60	56	69	55	51	58	50	40
29-10-2014	59	53	64	54	48	61	50	40
30-10-2014	59	56	63	57	51	62	50	40

Close examination to above data reveals following observations:

- Sound level data at NSIT always exceed the prescribed limit of day and night time.

- Sound level data ranges from 51 dB(A) (24/10/2014) to 104 dB(A) (20/10/2014) for day time and during night time sound level data varies from 46 dB(A) (24/10/2014) to 76 dB(A) (23/10/2014).
- Hourly basis data shows that the maximum sound level of 89 dB(A) at 01.00 P.M during 20/10/2014 whereas minimum sound level of 48 dB(A) was observed at 04.00 AM during 24/10/2014.

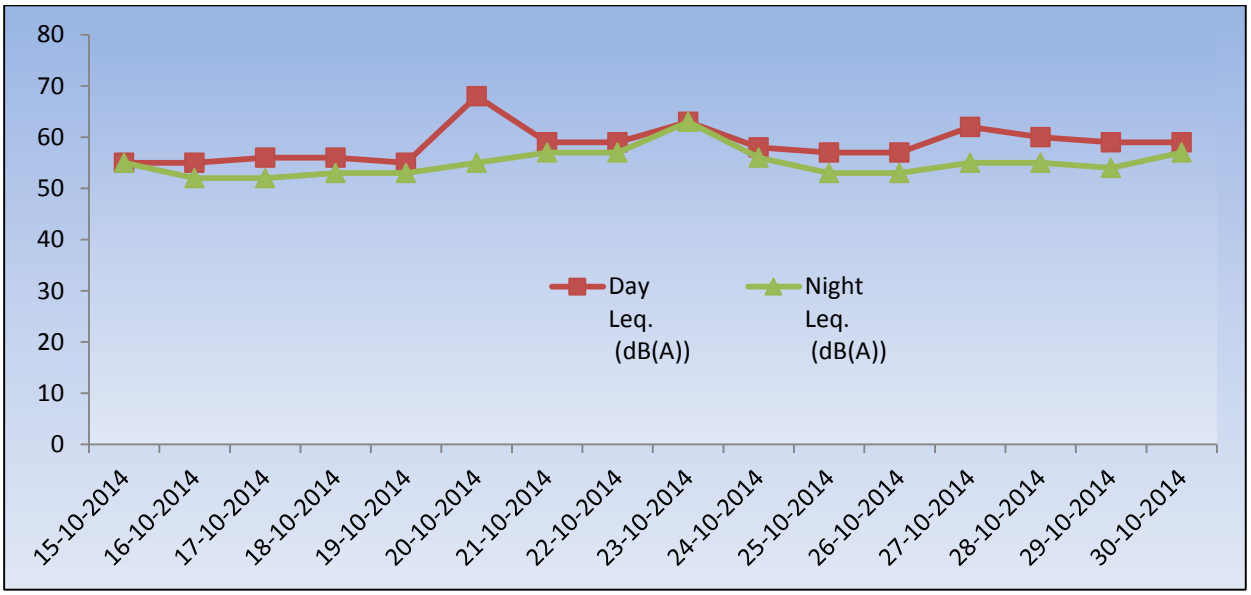

Figure 11: Ambient Noise level trend of NSIT

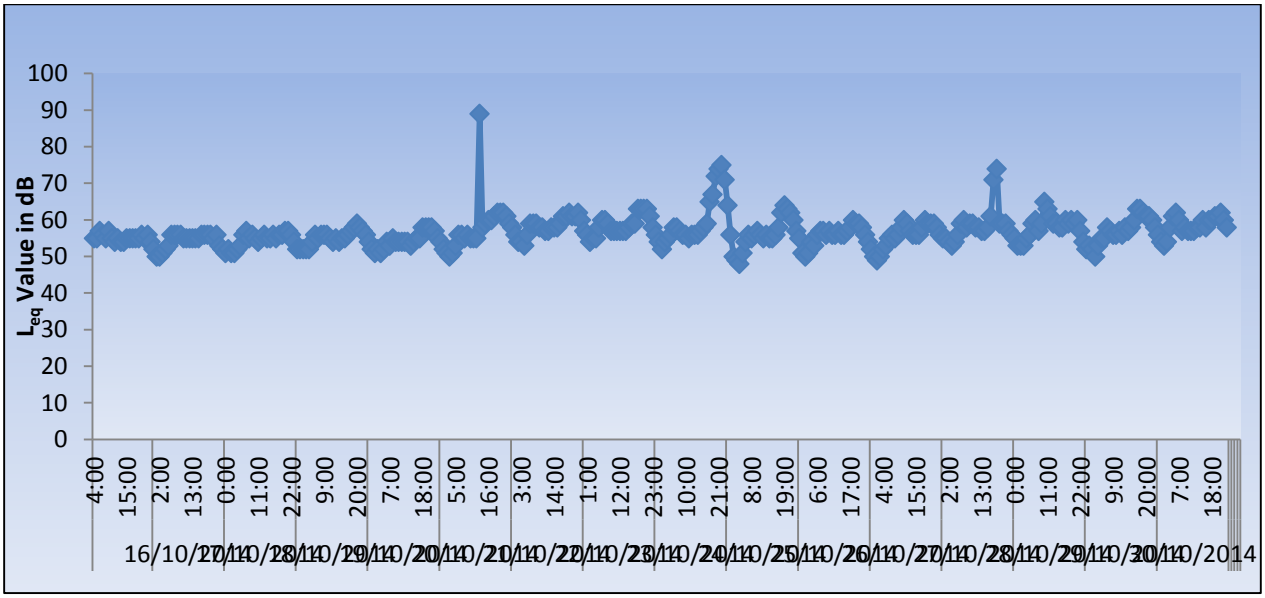

Figure 12: Ambient Noise level trend of NSIT on hourly basis

6.3MUMBAI

Mumbai also known as the capital city of the Indian state of Maharashtra is located at 18.9750° N, 72.8258° E, and lies in west coast of India and has a deep natural harbor. Mumbai is spread over an area of 603.4 sq. kilometers. Mumbai is the eighth most populated city in the world with Current Population of **12,655,220** as per census-2011. In Mumbai, five monitoring stations are installed and details are depicted in table - 8 and figure -13.

Table 8: Monitoring locations of Mumbai

Sl. No.	Station location	Category	Latitude	Longitude
1.	Thane	Commercial	19º0' 57.38" N	72º51' 29.24'' E
2.	Vashi Hospital	Silence Zone	19º4' 45.49" N	73º0' 0.12'' E
3.	Ashp	Silence Zone	19º1' 15.83'' N	72º51' 33.24'' E
4.	Bandra	Commercial	19º3' 20.77'' N	72º49' 49.41'' E
5.	MPCB Head Quarter	Commercial	19º6' 42.73'' N	73º0' 43.80'' E

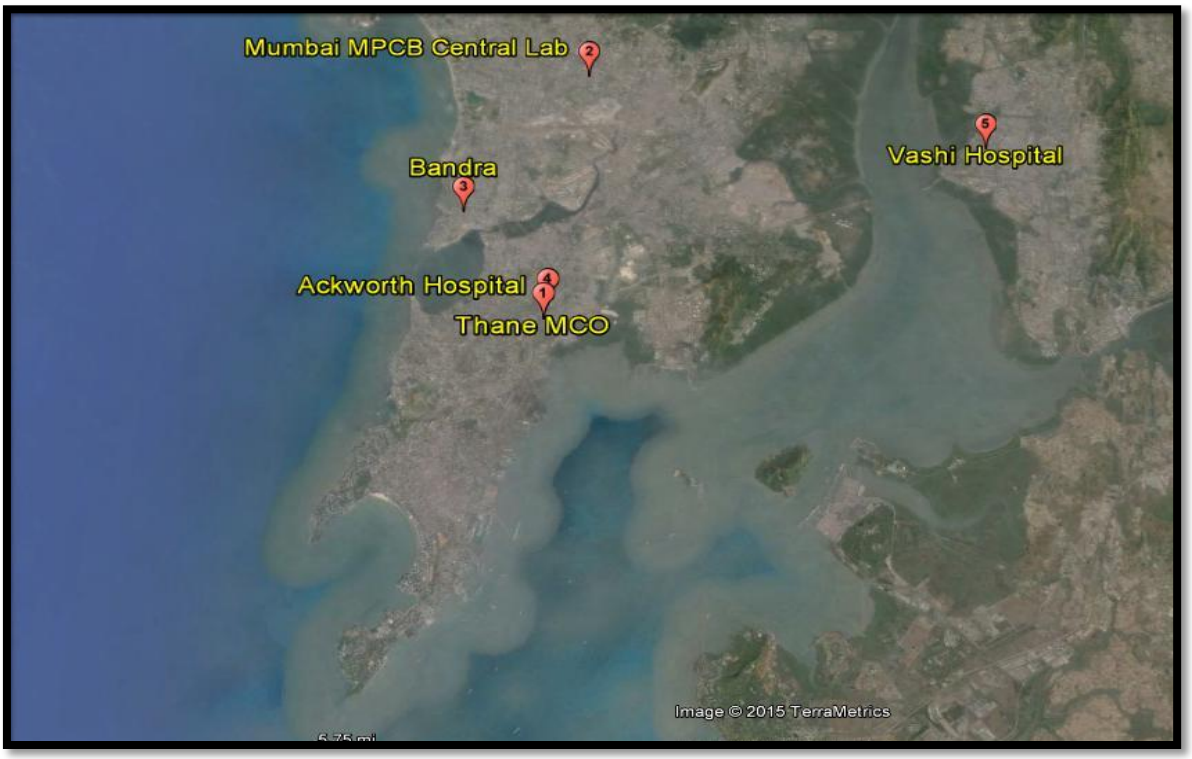

Figure 13: Map shows the monitoring locations of Mumbai

6.4 AMBIENT NOISE MONITORING DATA OF MUMBAI'S STATION

6.4.1 NOISE MONITORING STATION AT THANE

The station is installed at Thane and fall under the category of Commercial Zone. The GPS coordinate of said site is **19º0' 57.38'' N** and **72º51' 29.24'' E.** The ambient noise monitoring data of Thane for the period of 15/10/2014 to 30/10/2014 is placed in table - 9. Figure -14 depicts the trend of Thane Station for day-night time. Hourly basis data of Thane is placed in table - 2 of Annexure – I and graphical representation is shown in figure - 15.

Table 9: Ambient Noise Level Data of Thane

Date	Day Leq. (dB(A))	Day Min. (dB(A))	Day Max. (dB(A))	Night Leq. (dB(A))	Night Min. (dB(A))	Night Max. (dB(A))	Limit Day dB(A) 6AM to 10PM	Limit Day dB(AA) 10PM to 6AM
15-10-2014	63	59	67	58	49	64	65	55
16-10-2014	64	59	66	58	55	61	65	55
17-10-2014	64	60	67	57	50	63	65	55
18-10-2014	65	61	69	57	48	63	65	55
19-10-2014	65	59	76	58	54	68	65	55
20-10-2014	65	60	70	58	52	62	65	55
21-10-2014	65	60	67	58	55	65	65	55
22-10-2014	66	62	71	60	55	71	65	55
23-10-2014	67	61	**78**	64	49	**79**	65	55
24-10-2014	64	59	70	61	55	69	65	55
25-10-2014	64	60	70	63	55	73	65	55
26-10-2014	62	59	66	58	47	68	65	55
27-10-2014	64	59	71	56	**45**	61	65	55
28-10-2014	64	58	67	57	47	65	65	55
29-10-2014	63	**57**	66	56	48	62	65	55
30-10-2014	64	58	68	58	54	62	65	55

Close examination to above table reveals following observations:

- Out of 16 days observations, 02 times sound level data exceed the prescribed limit of 65 dB (A) (day time) whereas sound level always above the prescribe limits of 55 dB(A) (night time).
- During day time, sound level data varies from 57 dB(A) (29/10/2014) to 78 dB(A) (23/10/2014) and during night time sound level data ranges from 45 dB(A) (27/10/2014) to 79 dB(A) (23/10/2014).

- Hourly basis data revels the maximum sound level of 75 dB(A) at 07.00 PM during 21/10/2014 day whereas minimum sound level was observed at 02.00 AM during 24/10/2014.

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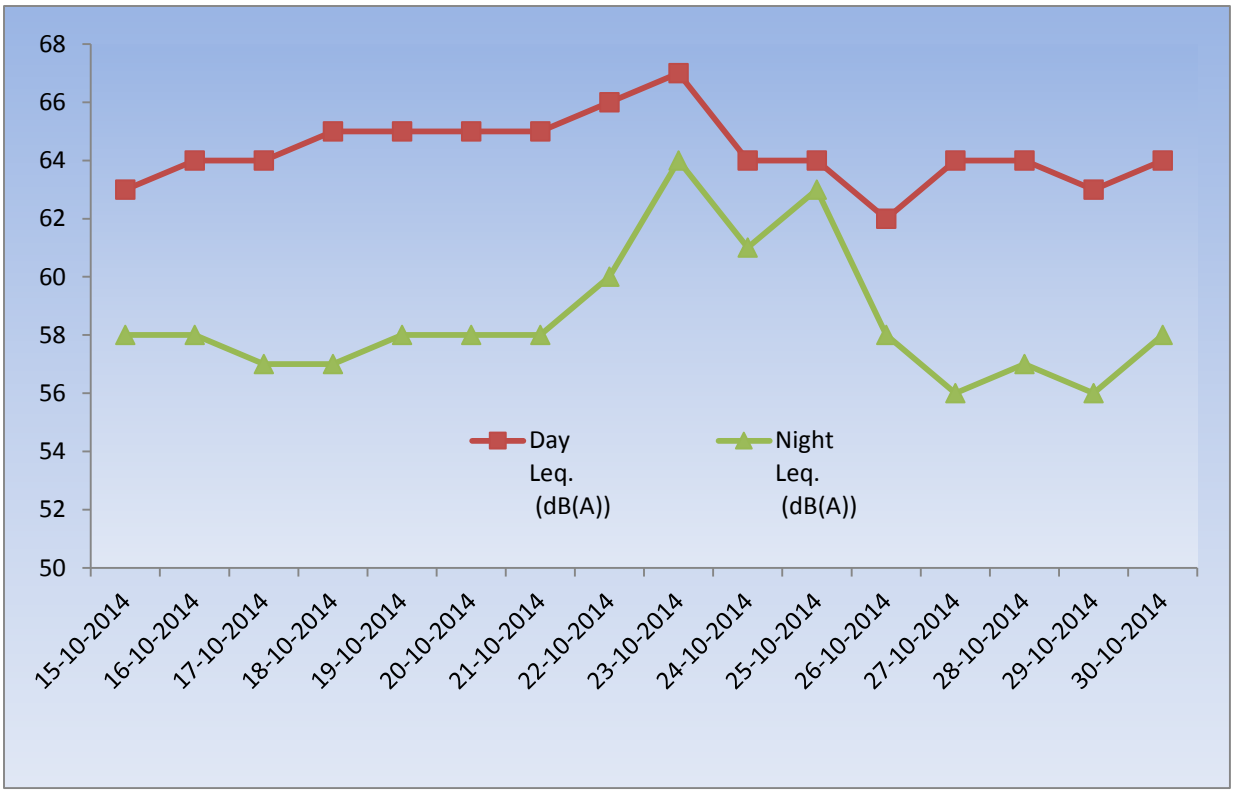

Figure 14: Ambient Noise level trend of Thane

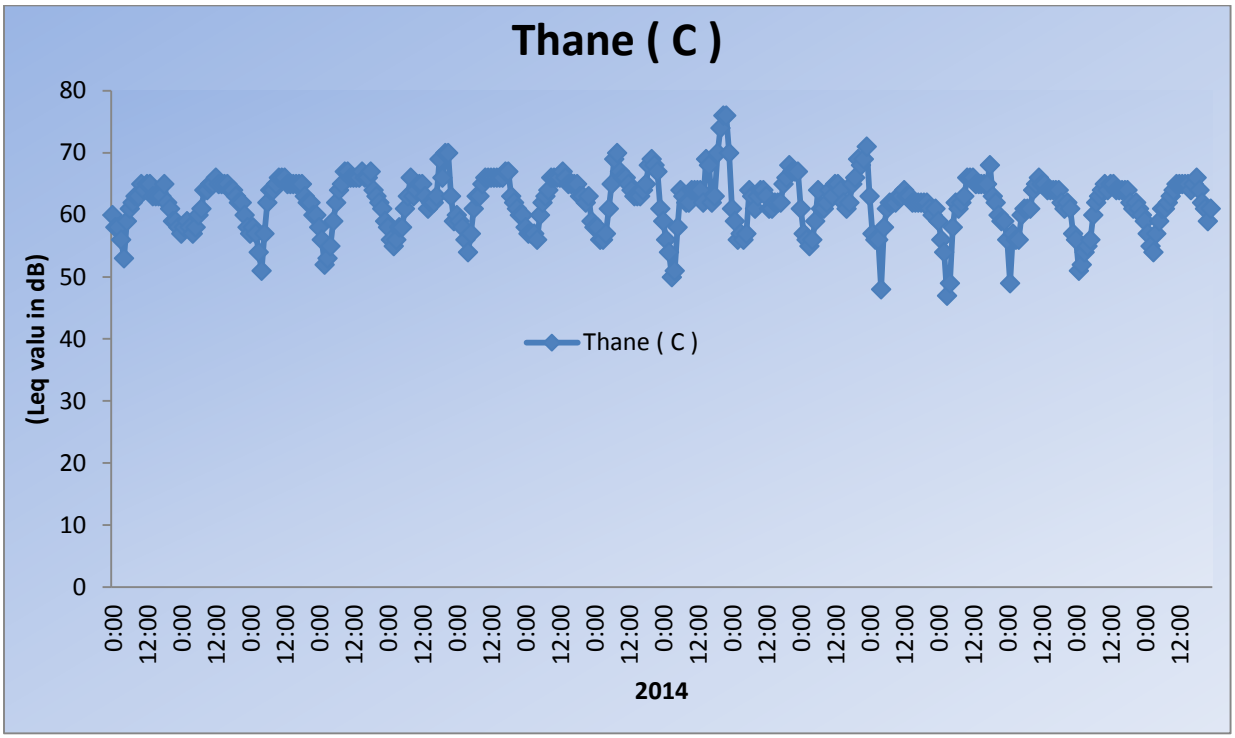

Figure 15: Ambient Noise level trend of Thane on hourly basis

6.4.2 NOISE MONITORING STATION AT VASHI HOSPITAL

The noise monitoring station is installed in premises of Vashi Hospital. The station fall under the category of Silence zone with GPS coordinate **19°4' 45.49'' N** and **73°0' 0.12'' E**. The ambient noise monitoring data for the period 15/10/2014 to 30/10/2014 is placed in table - 10. Figure – 16 depicts the trend of Vashi Hospital Station for day-night time. Hourly basis data of Vashi Hospital is placed in table - 2 of Annexure-I and graphical representation is shown in figure - 17.

Table 10: Ambient Noise Level Data of Vashi Hospital

Date	Day Leq. (dB(A))	Day Min. (dB(A))	Day Max. (dB(A))	Night Leq. (dB(A))	Night Min. (dB(A))	Night Max. (dB(A))	Limit Day dB(A) 6AM to 10PM	Limit Day dB(AA) 10PM to 6AM
15-10-2014	68	57	71	60	52	67	50	40
16-10-2014	71	59	77	59	50	67	50	40
17-10-2014	71	60	77	60	50	69	50	40
18-10-2014	70	59	76	59	51	70	50	40
19-10-2014	68	59	72	59	49	67	50	40
20-10-2014	69	59	74	59	49	68	50	40
21-10-2014	69	59	73	60	50	68	50	40
22-10-2014	69	59	72	60	50	70	50	40

23-10-2014	69	59	80	62	52	72	50	40
24-10-2014	68	57	73	61	**48**	70	50	40
25-10-2014	69	57	75	61	51	69	50	40
26-10-2014	67	**55**	71	59	**48**	67	50	40
27-10-2014	70	58	75	58	49	68	50	40
28-10-2014	79	65	**99**	62	49	**87**	50	40
29-10-2014	69	59	74	59	50	67	50	40
30-10-2014	69	58	72	59	51	68	50	40

Close examination to above table reveals following observations:

- Sound level data of Vashi Hospital exceed the prescribed limit of 50 dB(A) (day time) for 15 observation whereas sound level above the prescribe limits of 40 dB (A) (night time) for 15 observations.
- During day time, sound level data varies from 55 dB(A) (26/10/2014) to 99 dB(A) (28/10/2014) and during night time sound level data ranges from 48 dB(A) (24-26/10/2014) to 87 dB(A) (28/10/2014).
- Hourly basis data revels the maximum sound level of 96 dB(A) at 06.00 AM during 28/10/2014 whereas minimum sound level of 52 dB(A) was observed at various occasions.

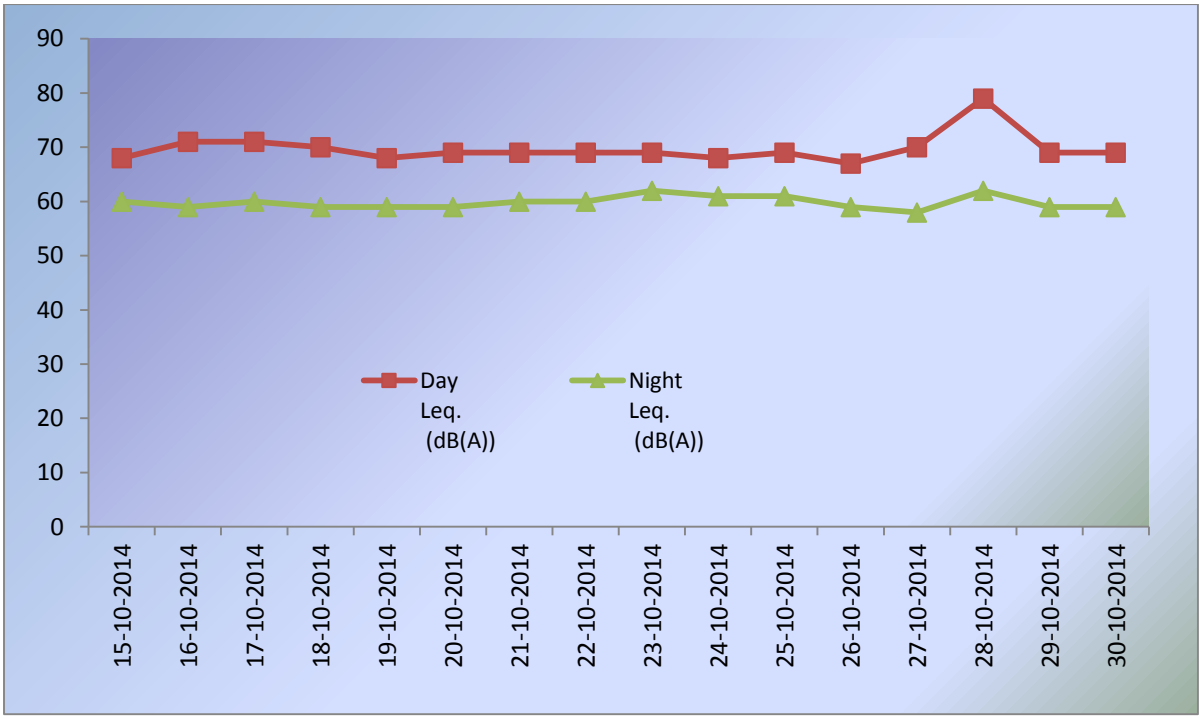

Figure 16: Ambient Noise level trend of Vashi Hospital

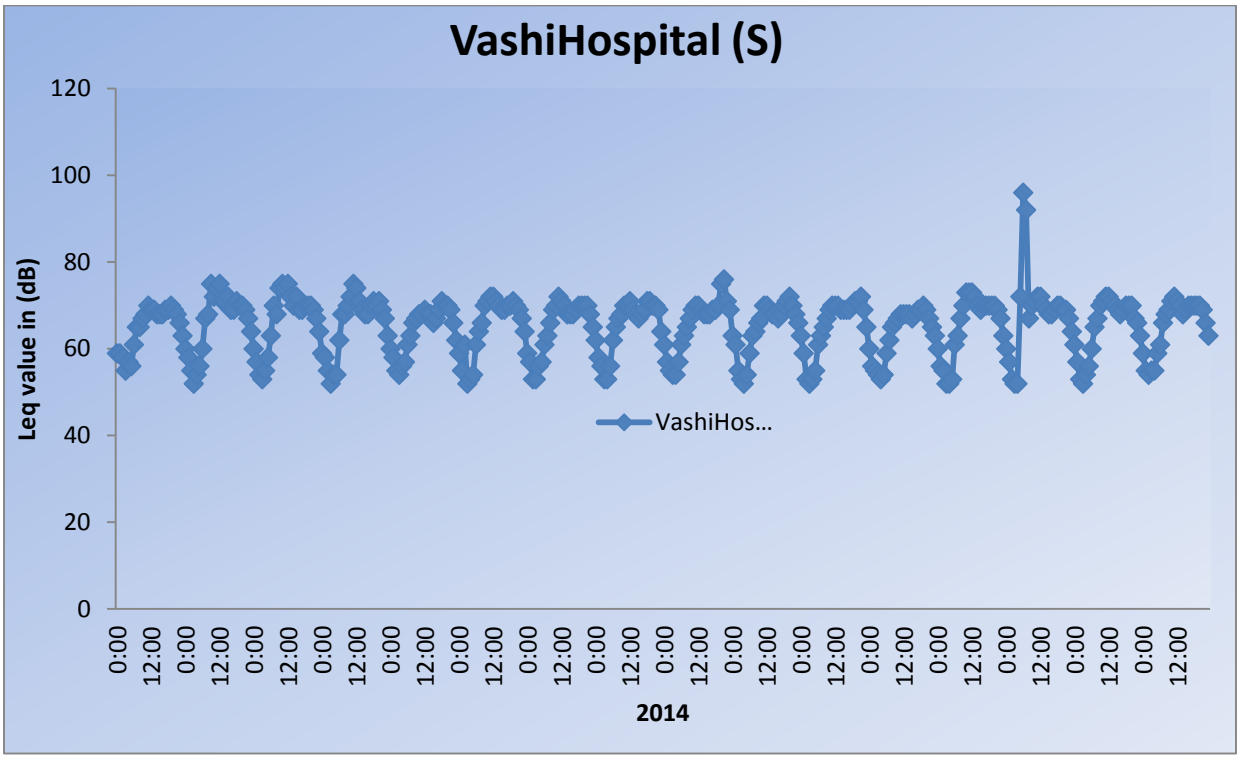

Figure 17: Ambient Noise level trend of Vashi Hospital on hourly basis

6.4.3 NOISE MONITORING STATION AT ASHP

The noise monitoring station is installed in ASHP. The station fall under the category of silence zone having GPS coordinate **19°1' 15.83'' N** and **72°51' 33.24'' E**. The ambient noise monitoring data for the period 15/10/2014 to 30/10/2014 is placed in table -11. Figure – 18 show the trend of Ashp Station for day-night time. Hourly basis data of DCE is mentioned in table - 2 of Annexure-I and graphical representation is shown in figure - 19.

Table 11: Ambient Noise Level Data of Ashp

Date	Day Leq. (dB(A))	Day Min. (dB(A))	Day Max. (dB(A))	Night Leq. (dB(A))	Night Min. (dB(A))	Night Max. (dB(A))	Limit Day dB(A) 6AM to 10PM	Limit Day dB(AA) 10PM to 6AM
15-10-2014	63	61	66	60	56	63	50	40
16-10-2014	65	62	67	60	55	65	50	40
17-10-2014	65	61	68	61	56	66	50	40
18-10-2014	65	62	68	61	56	65	50	40
19-10-2014	63	61	66	60	56	64	50	40
20-10-2014	65	61	80	60	55	65	50	40

21-10-2014	66	62	77	61	56	66	50	40
22-10-2014	66	63	**84**	61	57	68	50	40
23-10-2014	65	62	72	62	56	**71**	50	40
24-10-2014	64	61	68	62	**53**	69	50	40
25-10-2014	66	**60**	71	60	**53**	68	50	40
26-10-2014	65	61	73	59	54	63	50	40
27-10-2014	65	61	68	60	54	65	50	40
28-10-2014	65	61	68	60	54	66	50	40
29-10-2014	65	61	67	61	57	64	50	40
30-10-2014	65	**60**	68	60	56	64	50	40

Close examination to above data reveals following observations:

- At ASHP, Sound level data exceed the prescribed limit of 50 dB(A) (day time) for all15 days whereas sound level always above the prescribe limits of 40 dB(A) (night time).
- Sound level data varies from 60 dB(A) (25-30/10/2014) to 84 dB(A) (22/10/2014) for day time and during night time sound level data ranges from 53 dB(A) (24-25/10/2014) to 71dB(A) (23/10/2014).
- Hourly basis data revels the maximum sound level of 75 dB(A) at 07.00 PM during 21/10/2014 whereas minimum sound level of 55 dB(A) was observed at 02.00 AM during 25/10/2014.

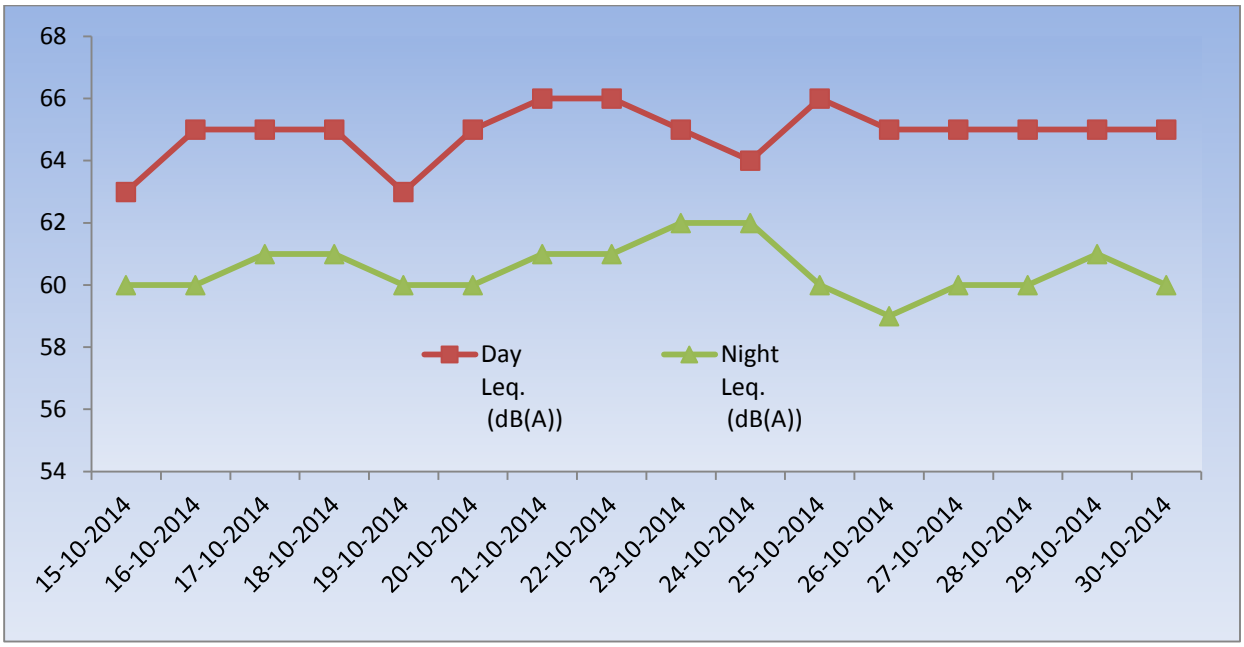

Figure 18: Ambient Noise level trend of Ashp

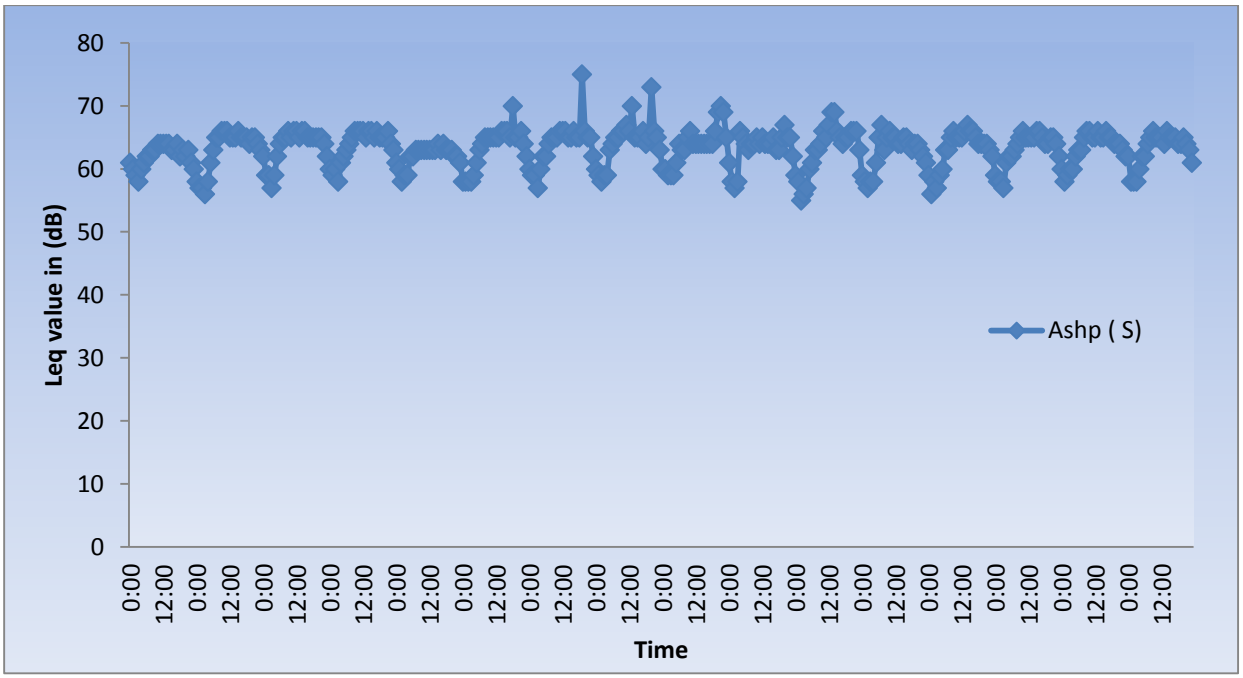

Figure 19: Ambient Noise level trend of Ashp on hourly basis

6.4.4 NOISE MONITORING STATION AT BANDRA

The noise monitoring station is installed at Bandra. The station fall under the category of commercial zone having prescribed limits of 65 dB(A) for day time and 55 dB(A) for

night time. The GPS coordinate **19º3' 20.77'' N** and **72º49' 49.41'' E**. The ambient noise monitoring data for the period 15/10/2014 to 30/10/2014 is placed in table - 12. Figure - 20 show the trend of Bandra Station for day-night time. Hourly basis data of Bandra is mentioned in table - 2 of Annexure-I and graphical representation is shown in figure - 21.

Table 12: Ambient Noise Level Data of Bandra

Date	Day Leq. (dB(A))	Day Min. (dB(A))	Day Max. (dB(A))	Night Leq. (dB(A))	Night Min. (dB(A))	Night Max. (dB(A))	Limit Day dB(A) 6AM to 10PM	Limit Day dB(AA) 10PM to 6AM
15-10-2014	69	67	**76**	67	64	70	65	55
16-10-2014	69	67	71	67	64	70	65	55
17-10-2014	69	**66**	72	71	64	**91**	65	55
18-10-2014	70	67	71	68	65	71	65	55
19-10-2014	69	**66**	72	68	65	70	65	55
20-10-2014	70	**66**	74	67	**63**	70	65	55
21-10-2014	70	**66**	74	67	64	70	65	55
22-10-2014	71	67	74	67	64	70	65	55
23-10-2014	69	67	73	68	64	74	65	55
24-10-2014	70	**66**	73	67	64	70	65	55
25-10-2014	70	**66**	73	67	**63**	72	65	55
26-10-2014	69	**66**	71	67	64	71	65	55
27-10-2014	70	67	74	67	63	71	65	55
28-10-2014	70	67	72	67	64	70	65	55
29-10-2014	70	**66**	72	66	**63**	70	65	55
30-10-2014	70	**66**	72	66	**63**	70	65	55

Close examination to above data reveals following observations:

- Sound level data at Bandra always exceed the prescribed limit of day and night time.
- Sound level data varies from 66 dB(A) (17,19,20,21,24,25,26,29-30/10/2014) to 76 dB(A) (15/10/2014) for day time and during night time sound level data ranges from 63 dB(A) (20,25,29-30/10/2014) to 91dB(A) (17/10/2014).

- Hourly basis data revels the maximum sound level of 83 dB(A) at 11.00 P.M during 17/10/2014 whereas minimum sound level of 64 dB(A) was observed at various occasion.

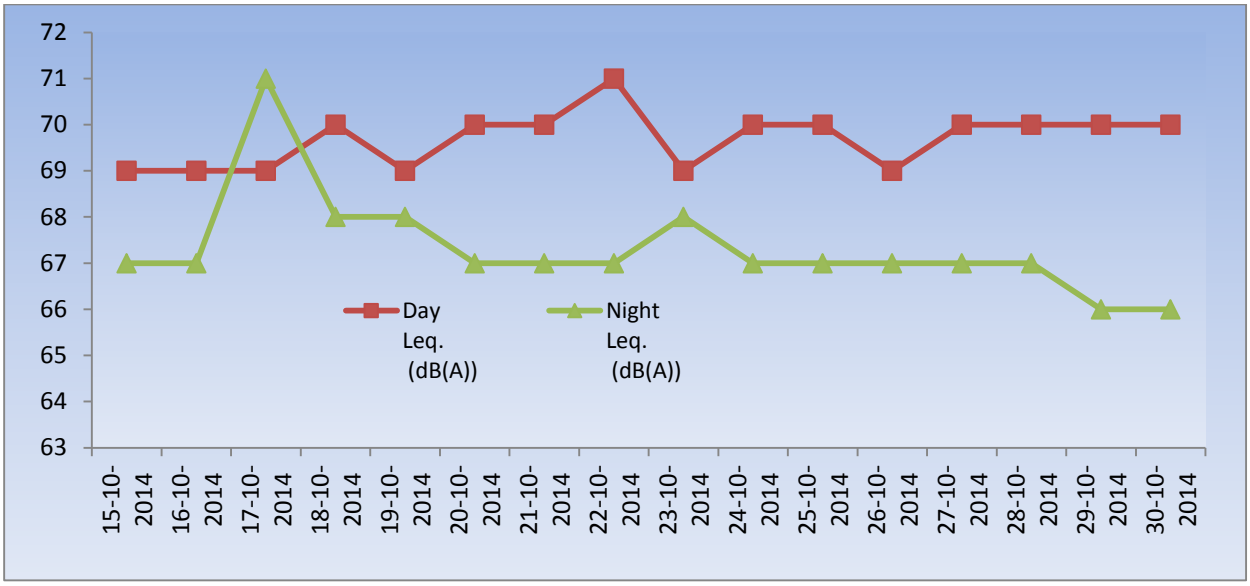

Figure 20: Ambient Noise level trend of Bandra

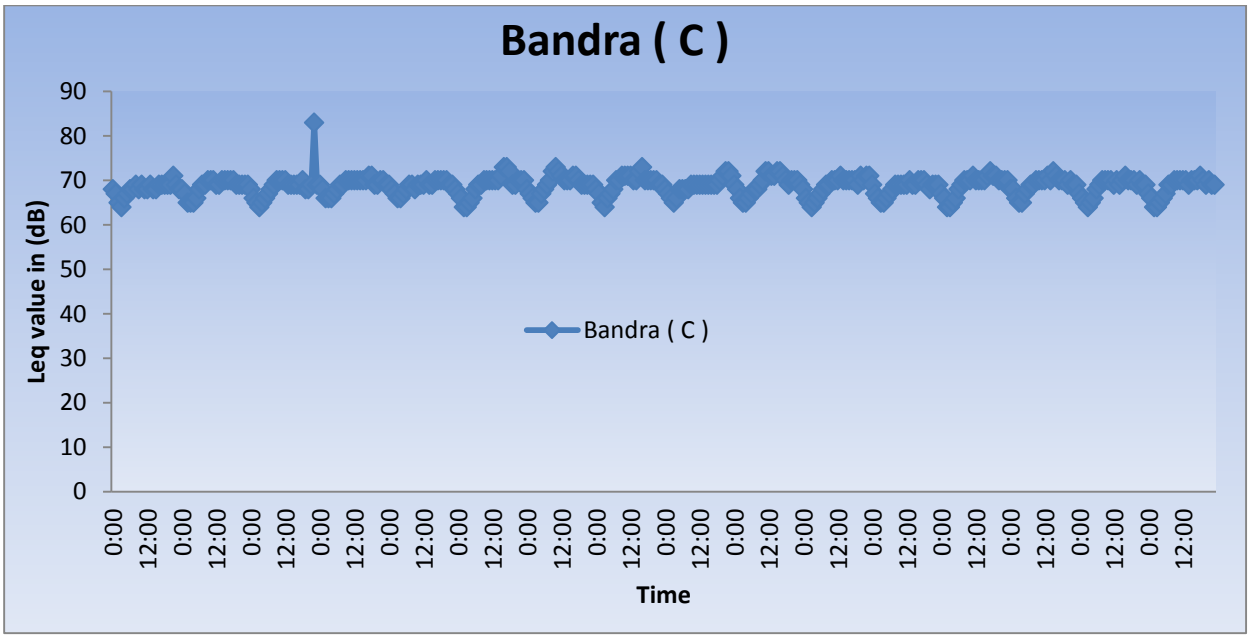

Figure 21: Ambient Noise level trend of Bandra on hourly basis

6.4.5 NOISE MONITORING STATION AT MPCB HQ

The noise monitoring station is installed at MPCB Head Quarter and station comes into category of commercial zone having prescribed limits of 65 dB(A) for day time and 55 dB (A) for night time. The GPS coordinate **19°6' 42.73'' N** and **73°0' 43.80'' E**. The ambient noise monitoring data for the period 15/10/2014 to 30/10/2014 is placed in table - 13. Figure - 22 show the trend of MPCB HQ Station for day-night time. Hourly basis data of MPCB HQ is mentioned in table - 2 of Annexure-I and graphical representation is shown in figure - 23.

Table 13: Ambient Noise Level Data of MPCB HQ

Date	Day Leq. (dB(A))	Day Min. (dB(A))	Day Max. (dB(A))	Night Leq. (dB(A))	Night Min. (dB(A))	Night Max. (dB(A))	Limit Day dB(A) 6AM to 10PM	Limit Day dB(AA) 10PM to 6AM
15-10-2014	70	68	74	69	66	72	65	55
16-10-2014	71	68	74	68	64	72	65	55
17-10-2014	72	70	74	70	66	72	65	55
18-10-2014	71	70	74	70	67	73	65	55
19-10-2014	69	67	73	68	64	72	65	55
20-10-2014	71	68	74	68	62	73	65	55
21-10-2014	72	69	74	70	66	72	65	55
22-10-2014	72	69	74	69	65	73	65	55
23-10-2014	69	67	72	68	65	70	65	55
24-10-2014	69	**65**	73	66	61	70	65	55
25-10-2014	84	69	**104**	67	**59**	**88**	65	55
26-10-2014	70	68	80				65	55
27-10-2014	81	69	96				65	55
28-10-2014	73	68	90	71	69	74	65	55
29-10-2014	74	69	97	70	65	73	65	55
30-10-2014	72	69	74	70	64	73	65	55

Close examination to above data reveals following observations:

- Sound level data at MPCB HQ always exceed the prescribed limit of day and night time.
- Sound level data ranges from 65 dB(A) (24/10/2014) to 104 dB(A) (25/10/2014) for day time and during night time sound level data varies from 59 dB(A) (25/10/2014) to 88 dB(A) (25/10/2014).

- Hourly basis data shows that the maximum sound level of 96 dB(A) at 11.00 A.M during 25/10/2014 whereas minimum sound level of 63 dB(A) was observed at 01.00 – 02.00 AM during 25-24/10/2014.

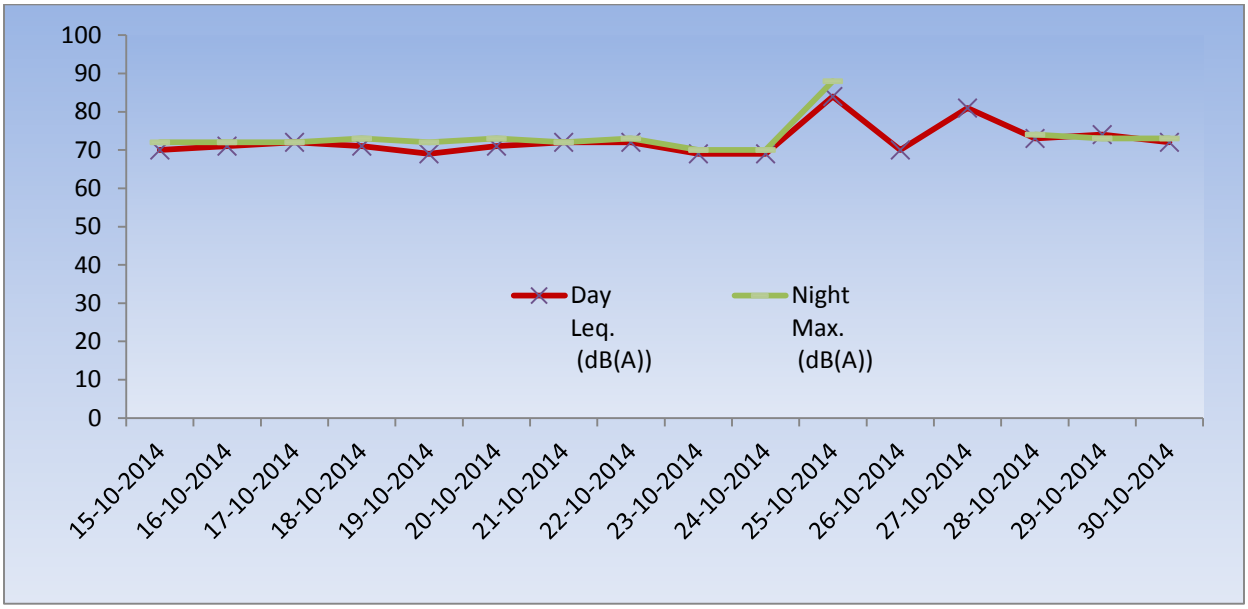

Figure 22: Ambient Noise level trend of MPCB HQ

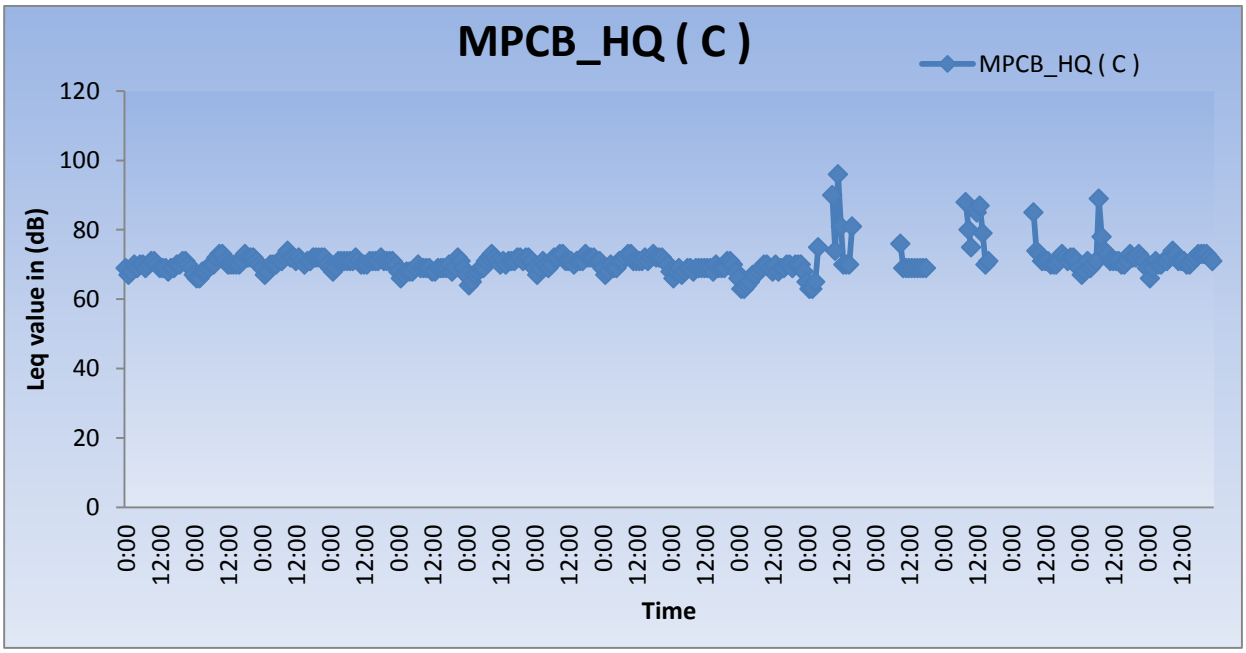

Figure 23: Ambient Noise level trend of MPCB HQ on hourly basis

6.5 LUCKNOW

Lucknow the capital of Uttar Pradesh is located at 26.8470° N, 80.9470° E and lies in Northern India. It stands on the northwestern shore of the Gomti River. It is the 8th most populated city of India and the largest in Uttar Pradesh. The city stands at an elevation of approximately 123 meters (404 ft) above sea level and covers an area of 2,528 square kilometers (976 sq mi). In Lucknow, five monitoring stations are installed and details are depicted in table - 14 and figure – 24.

Table 14: Monitoring locations of Mumbai

Sl. No.	Station location	Category	Latitude	Longitude
1.	Talkatora	Industrial	26º50' 2.44" N	80º53' 30.25" E
2.	Hajrat Gunj	Commercial	26º51' 0.66" N	80º56' 51.59" E
3.	PGI	Silence Zone	26º45' 17.68" N	80º55' 59.53" E
4.	Indira Nagar	Residential	26º53' 25.08" N	80º59' 57.29" E
5.	Gomti Nagar	Silence Zone	26º52' 58.02" N	80º59' 58.02" E

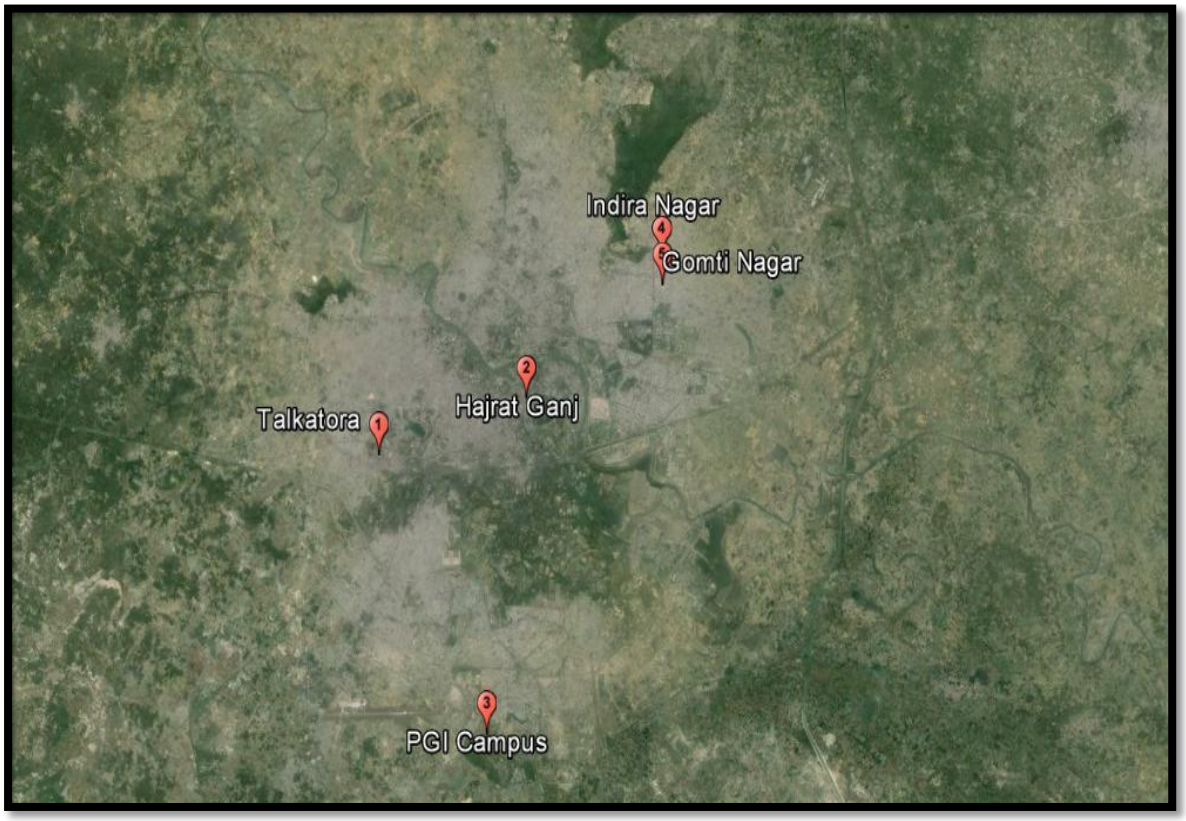

Figure 24: Map shows the monitoring locations of Lucknow

6.6 AMBIENT NOISE MONITORING DATA OF LUCKNOW'S STATION

6.6.1 NOISE MONITORING STATION AT TALKATORA

The station is installed at Talkatora and fall under the category of Industrial Zone. The GPS coordinate of said site is **26º50' 2.44'' N** and **80º53' 30.25'' E**. The ambient noise monitoring data of Talkatora for the period 15/10/2014 to 30/10/2014 is placed in table - 15. Figure - 25 depicts the trend of Talkatora Station for day-night time. Hourly basis data of IHBAS is placed in table - 3 of Annexure-I and graphical representation is shown in figure - 26.

Table 15: Ambient Noise Level Data of Talkatora

Date	Day Leq. (dB(A))	Day Min. (dB(A))	Day Max. (dB(A))	Night Leq. (dB(A))	Night Min. (dB(A))	Night Max. (dB(A))	Limit Day dB(A) 6AM to 10PM	Limit Day dB(AA) 10PM to 6AM
15-10-2014	65	54	70	55	**48**	63	75	70
16-10-2014	64	**52**	71	55	51	59	75	70
17-10-2014	72	54	**104**	59	56	66	75	70
18-10-2014	68	58	75	61	58	69	75	70
19-10-2014	66	58	79	61	57	64	75	70
20-10-2014	69	56	75	60	52	67	75	70
21-10-2014	69	56	77	60	56	67	75	70
22-10-2014	68	60	76	59	52	67	75	70
23-10-2014	66	59	83	61	53	**70**	75	70
24-10-2014	62	55	73	57	54	66	75	70
25-10-2014	60	54	63	54	**48**	62	75	70
26-10-2014	59	**52**	65	54	49	59	75	70
27-10-2014	69	56	76	58	53	67	75	70
28-10-2014	67	56	74	58	51	66	75	70
29-10-2014	68	58	73	59	52	65	75	70
30-10-2014	68	58	74	60	54	68	75	70

Close examination to above table reveals following observations:

- Sound level data at Talkatora always exceed the prescribed limit of 75 dB(A) day and 70 dB(A) night time.

- During day time, sound level data varies from 52 dB(A) (16-26/10/2014) to 104 dB(A) (17/10/2014) and during night time sound level data ranges from 48 dB(A) (25-16/10/2014) to 70 dB(A) (23/10/2014).
- Hourly basis data revels the maximum sound level of 91 dB(A) at 03.00 PM during 17/10/2014 whereas minimum sound level of 49 dB(A) was observed at 4.00 AM during 25/10/2014.

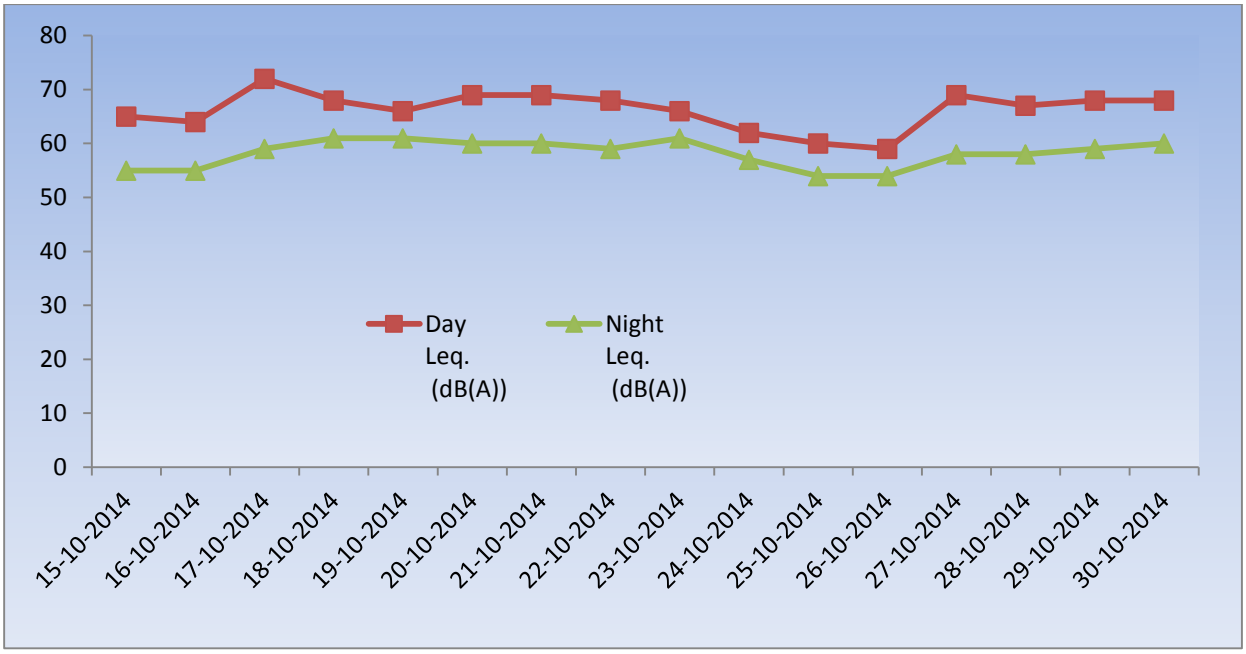

Figure 25: Ambient Noise level trend of Talkatora

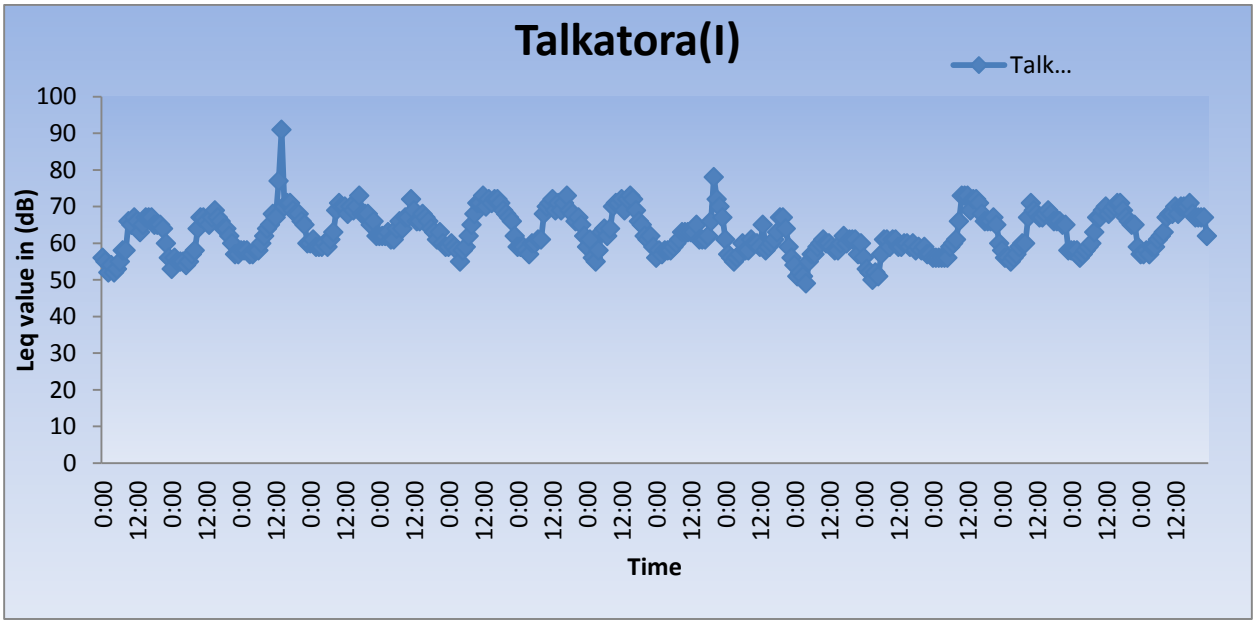

Figure 26: Ambient Noise level trend of Talkatora on hourly basis

6.6.2 NOISE MONITORING STATION AT HAJRATGANJ

The noise monitoring station is installed at Hajratganj. The station fall under the category of commercial zone with GPS coordinate **26º51' 0.66'' N** and **80º56' 51.59'' E**. The ambient noise monitoring data for the period 15/10/2014 to 30/10/2014 is placed in table -16. Figure - 27 depicts the trend of Hajratganj Station for day-night time. Hourly basis data of Hajratganj is placed in table - 3 of Annexure-I and graphical representation is shown in figure - 28.

Table 16: Ambient Noise Level Data of Hajratganj

Date	Day Leq. (dB(A))	Day Min. (dB(A))	Day Max. (dB(A))	Night Leq. (dB(A))	Night Min. (dB(A))	Night Max. (dB(A))	Limit Day dB(A) 6AM to 10PM	Limit Day dB(AA) 10PM to 6AM
15-10-2014	74	62	80	62	53	70	65	55
16-10-2014	74	62	79	63	55	72	65	55
17-10-2014	76	63	**99**	63	55	70	65	55
18-10-2014	74	63	79	65	59	71	65	55
19-10-2014	73	63	78	66	58	71	65	55
20-10-2014	75	63	80	64	57	72	65	55
21-10-2014	76	63	82	65	57	74	65	55
22-10-2014	75	65	80	66	58	73	65	55
23-10-2014	71	65	77	68	59	**75**	65	55
24-10-2014	70	**61**	76	66	61	72	65	55
25-10-2014	72	63	79	64	54	73	65	55
26-10-2014	72	61	79	63	56	71	65	55
27-10-2014	74	64	81	62	**52**	69	65	55
28-10-2014	74	64	79	62	53	71	65	55
29-10-2014	75	62	80	62	53	70	65	55
30-10-2014	74	64	79	64	58	70	65	55

Close examination to above table reveals following observations:

- Sound level data of CPCB exceed the prescribed limit of 65 dB (A) (day time) for 15 observation whereas sound level above the prescribe limits of 55 dB (A) (night time) for 11 observations.

- During day time, sound level data varies from 53 dB(A) (26/10/2014) to 99 dB(A) (21/10/2014) and during night time sound level data ranges from 45 dB(A) (18/10/2014) to 82 dB(A) (23/10/2014).
- Hourly basis data revels the maximum sound level of 86 dB(A) at 12.00AM during 17/10/2014 whereas minimum sound level of 55 dB(A) was observed at 3.00 AM during 15-27/10/2014.

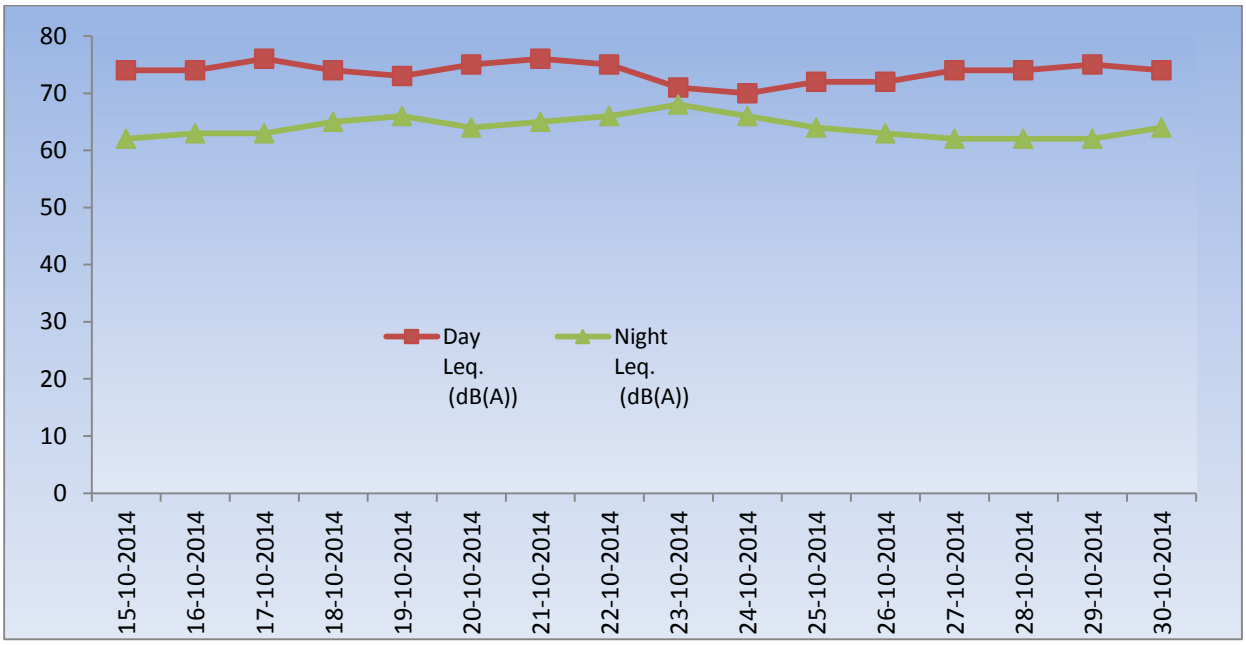

Figure 27: Ambient Noise level trend of Hajratganj

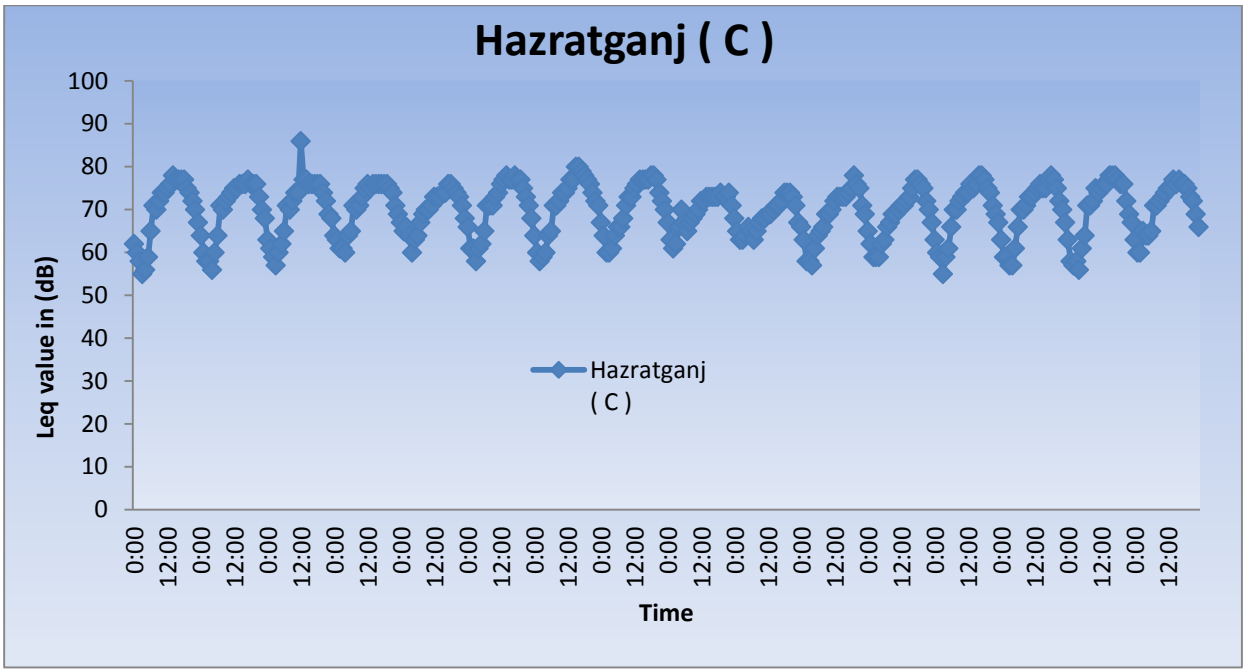

Figure 28: Ambient Noise level trend of Hajratganj on hourly basis

6.6.3 NOISE MONITORING STATION AT PGI

The noise monitoring station is installed in PGI. The station fall under the category of silence zone having GPS coordinate **26°45' 17.68'' N** and **80°55' 59.53'' E**. The ambient noise monitoring data for the period 15/10/2014 to 30/10/2014 is placed in table -17. Figure - 29 show the trend of PGI Station for day-night time. Hourly basis data of PGI is mentioned in table - 3 of Annexure-I and graphical representation is shown in figure - 30.

Table 17: Ambient Noise Level Data of PGI

Date	Day Leq. (dB(A))	Day Min. (dB(A))	Day Max. (dB(A))	Night Leq. (dB(A))	Night Min. (dB(A))	Night Max. (dB(A))	Limit Day dB(A) 6AM to 10PM	Limit Day dB(AA) 10PM to 6AM
15-10-2014	64	56	72	56	51	64	50	40
16-10-2014	64	56	70	56	51	62	50	40
17-10-2014	75	57	**106**	57	53	69	50	40
18-10-2014	61	56	69	56	50	64	50	40
19-10-2014	58	**53**	70	54	48	63	50	40
20-10-2014	63	58	67	55	**47**	65	50	40
21-10-2014	63	56	72	57	52	70	50	40
22-10-2014	62	55	76	59	54	63	50	40
23-10-2014	64	54	82	60	53	78	50	40

24-10-2014	63	54	84	58	52	**81**	50	40
25-10-2014	60	55	67	56	52	64	50	40
26-10-2014	60	55	70	56	52	66	50	40
27-10-2014	64	58	74	56	51	66	50	40
28-10-2014	64	57	71	57	53	65	50	40
29-10-2014	64	56	69	57	50	68	50	40
30-10-2014	64	58	70	60	53	66	50	40

Close examination to above data reveals following observations:

- Sound level data at PGI always exceed the prescribed limit of 50 dB(A) day and 40 dB(A) night time.
- Sound level data varies from 53 dB(A) (17/10/2014) to 106 dB (A) (17/10/2014) for day time and during night time sound level data ranges from 47 dB(A) (20/10/2014) to 81 dB (A) (24/10/2014).
- Hourly basis data revels the maximum sound level of 97 dB(A) at 10.00 AM during 20/10/2014 whereas minimum sound level of 49 dB(A) was observed at 04.00, 12.00 AM during 20/10/2014.

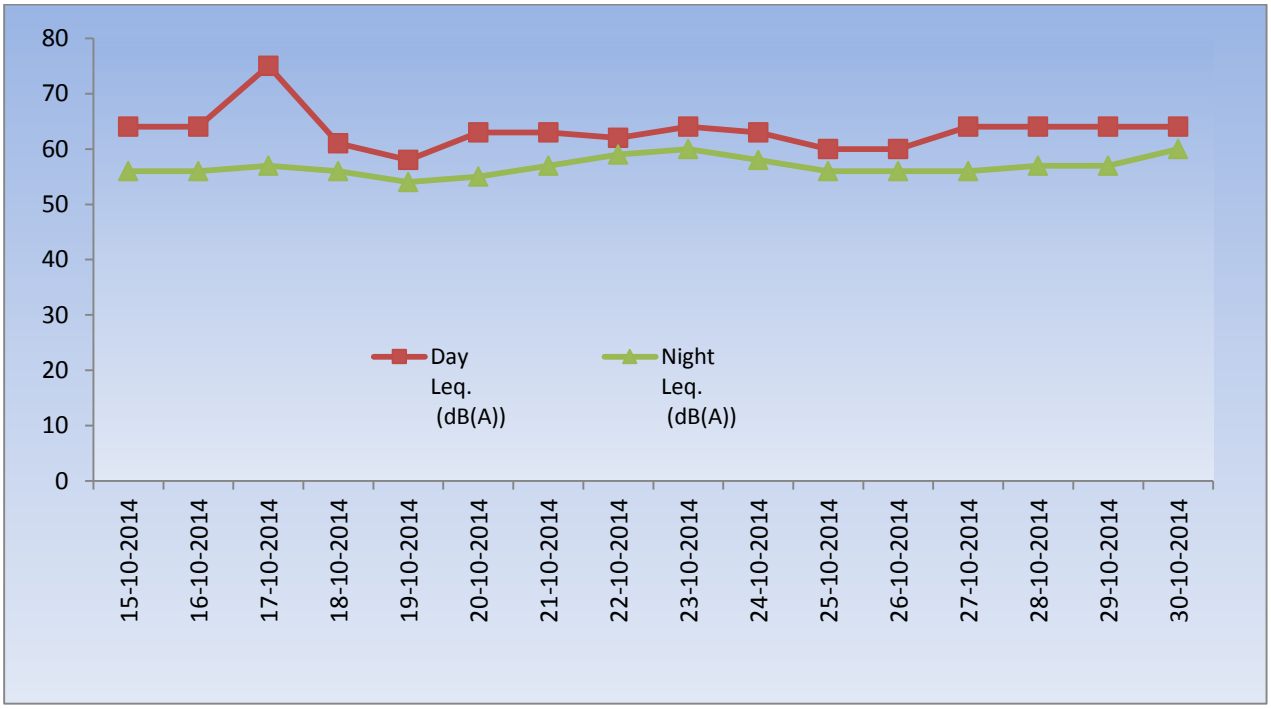

Figure 28: Ambient Noise level trend of PGI

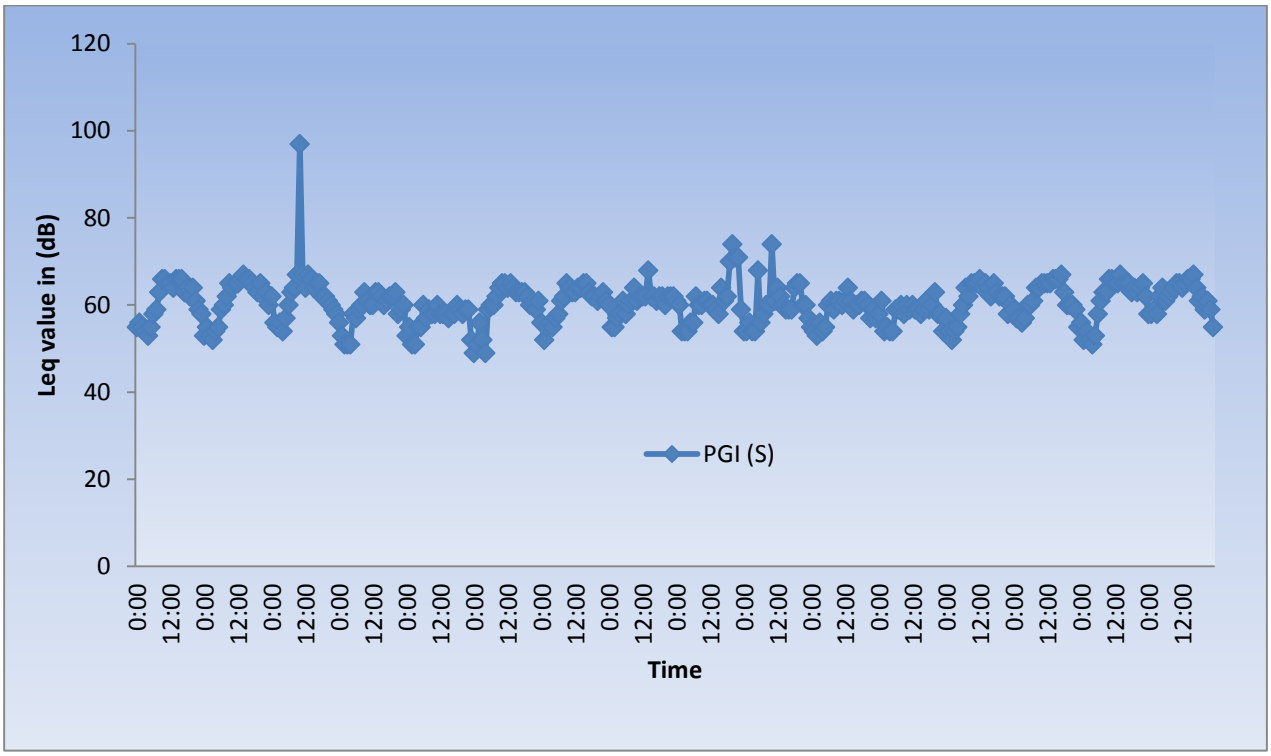

Figure 29: Ambient Noise level trend of PGI on hourly basis

6.6.4 NOISE MONITORING STATION AT INDIRA NAGAR

The noise monitoring station is installed at Indira Nagar. The station fall under the category of residential zone having prescribed limits of 55 dB(A) for day time and 45 dB (A) for night time. The GPS coordinate **26°53' 25.08'' N** and **80°59' 57.29'' E**. The ambient noise monitoring data for the period 15/10/2014 to 30/10/2014 is placed in table -18. Figure - 30 show the trend of Indira Nagar Station for day-night time. Hourly basis data of Indira Nagar is mentioned in table - 3 of Annexure-I and graphical representation is shown in figure - 31.

Table 18: Ambient Noise Level Data of Indira Nagar

Date	Day Leq. (dB(A))	Day Min. (dB(A))	Day Max. (dB(A))	Night Leq. (dB(A))	Night Min. (dB(A))	Night Max. (dB(A))	Limit Day dB(A) 6AM to 10PM	Limit Day dB(AA) 10PM to 6AM
15-10-2014	59	49	67	46	**40**	55	55	45
16-10-2014	58	46	69	50	43	64	55	45
17-10-2014	60	50	68	48	43	56	55	45
18-10-2014	69	50	**103**	48	42	58	55	45
19-10-2014	59	48	69	52	45	63	55	45

20-10-2014	59	50	66	50	46	64	55	45
21-10-2014	66	51	77	49	44	57	55	45
22-10-2014	57	50	65	50	45	59	55	45
23-10-2014	67	50	89	62	43	**81**	55	45
24-10-2014	60	47	75	57	42	73	55	45
25-10-2014	58	**45**	69	49	42	57	55	45
26-10-2014	56	49	69	47	**40**	57	55	45
27-10-2014	57	47	68	46	**40**	56	55	45
28-10-2014	57	48	65	48	42	56	55	45
29-10-2014	60	49	74	53	46	74	55	45
30-10-2014	58	49	67	48	44	57	55	45

Close examination to above data reveals following observations:

- Sound level data at Indira Nagar always exceed the prescribed limit of day and night time.
- Sound level data varies from 45 dB (A) (25/10/2014) to 103 dB (A) (18/10/2014) for day time and during night time sound level data ranges from 40 dB (A) (15, 26-27/10/2014) to 81 dB (A) (23/10/2014).
- Hourly basis data revels the maximum sound level of 88 dB (A) at 12.00 P.M during 18/10/2014 whereas minimum sound level of 41dB (A) was observed at 02.00 A.M during 27/10/2014.

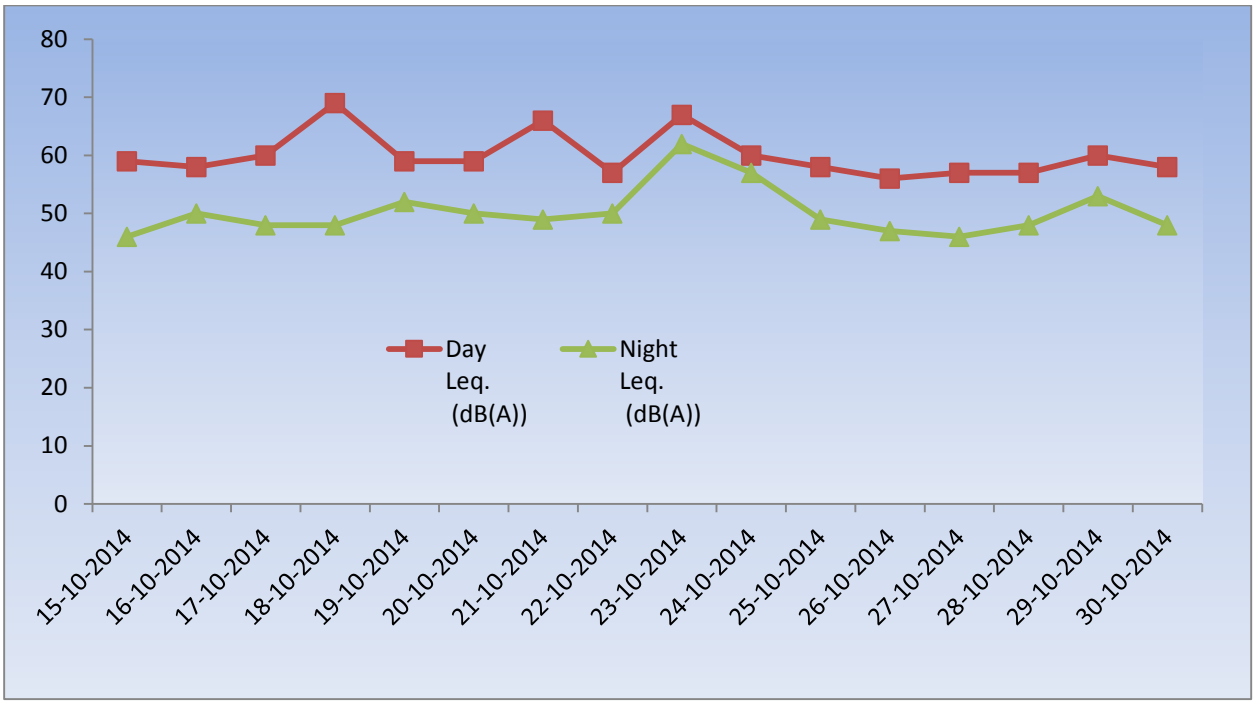

Figure 30: Ambient Noise level trend of Indira Nagar

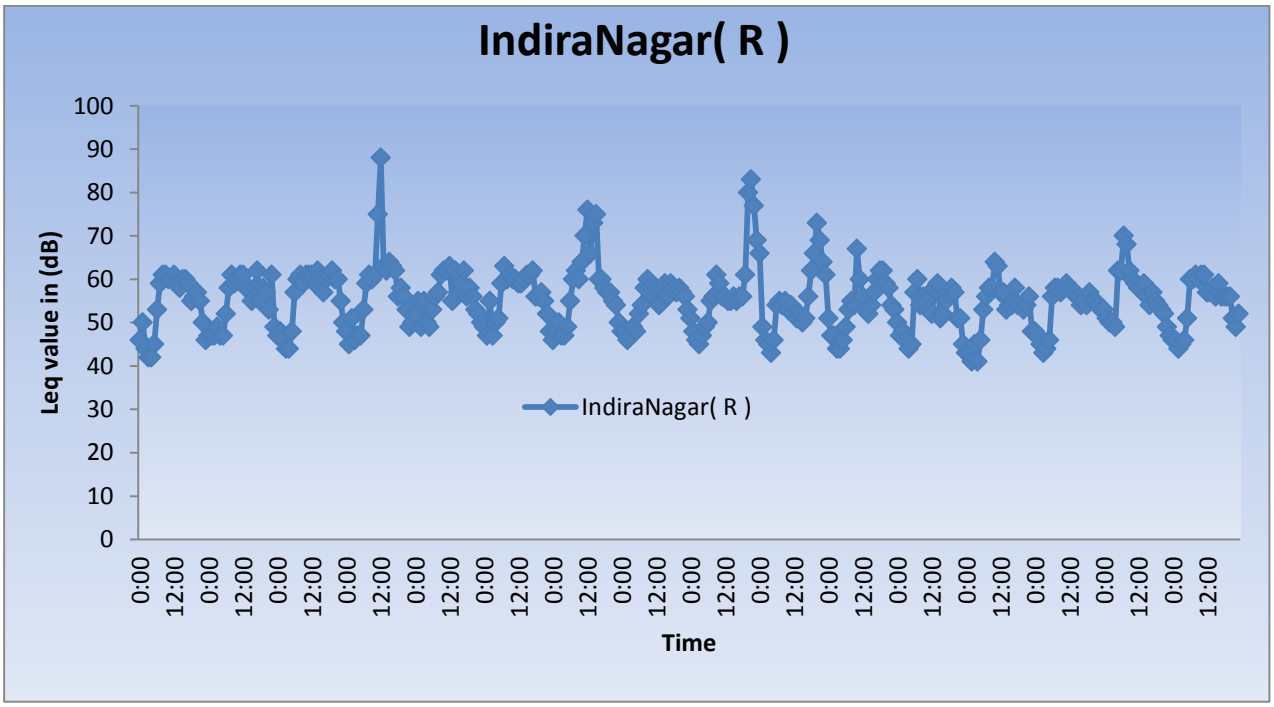

Figure 31: Ambient Noise level trend of Indira Nagar on hourly basis

6.6.5 NOISE MONITORING STATION AT GOMTI NAGAR

The noise monitoring station is installed at Gomti Nagar and station comes into category of silence zone having prescribed limits of 50 dB(A) for day time and 40 dB (A) for night time. The GPS coordinate **26º52' 58.02'' N** and **80º59' 58.02'' E**. The ambient noise monitoring data for the period 15/10/2014 to 30/10/2014 is placed in table - 19. Figure - 32 show the trend of Gomti Nagar Station for day-night time. Hourly basis data of Gomti Nagar is mentioned in table - 3 of Annexure-I and graphical representation is shown in figure - 33.

Table 19: Ambient Noise Level Data of Gomti Nagar

Date	Day Leq. (dB(A))	Day Min. (dB(A))	Day Max. (dB(A))	Night Leq. (dB(A))	Night Min. (dB(A))	Night Max. (dB(A))	Limit Day dB(A) 6AM to 10PM	Limit Day dB(AA) 10PM to 6AM
15-10-2014	73	60	101	59	53	64	50	40
16-10-2014	73	63	99	63	52	69	50	40
17-10-2014	68	61	72	59	51	65	50	40
18-10-2014	74	61	**104**	60	53	70	50	40
19-10-2014	67	61	74	59	53	66	50	40
20-10-2014	68	63	72	59	51	68	50	40
21-10-2014	68	60	73	59	52	68	50	40
22-10-2014	68	60	77	60	53	66	50	40
23-10-2014	69	60	82	64	54	**78**	50	40
24-10-2014	65	56	78	60	**49**	70	50	40
25-10-2014	66	**55**	79	58	**49**	67	50	40
26-10-2014	65	57	70	58	50	64	50	40
27-10-2014	68	58	77	59	50	66	50	40
28-10-2014	68	59	73	58	50	65	50	40
29-10-2014	68	60	79	59	51	71	50	40
30-10-2014	68	60	71	59	52	64	50	40

Close examination to above data reveals following observations:

- Sound level data at Gomti Nagar always exceed the prescribed limit of day and night time.

- Sound level data ranges from 55 dB (A) (25/10/2014) to 104 dB (A) (18/10/2014) for day time and during night time sound level data varies from 49 dB (A) (24-25/10/2014) to 78 dB (A) (23/10/2014).
- Hourly basis data shows that the maximum sound level of 92 dB (A) at 01.00 P.M during 18/10/2014 whereas minimum sound level of 52 dB (A) was observed at various occasions.

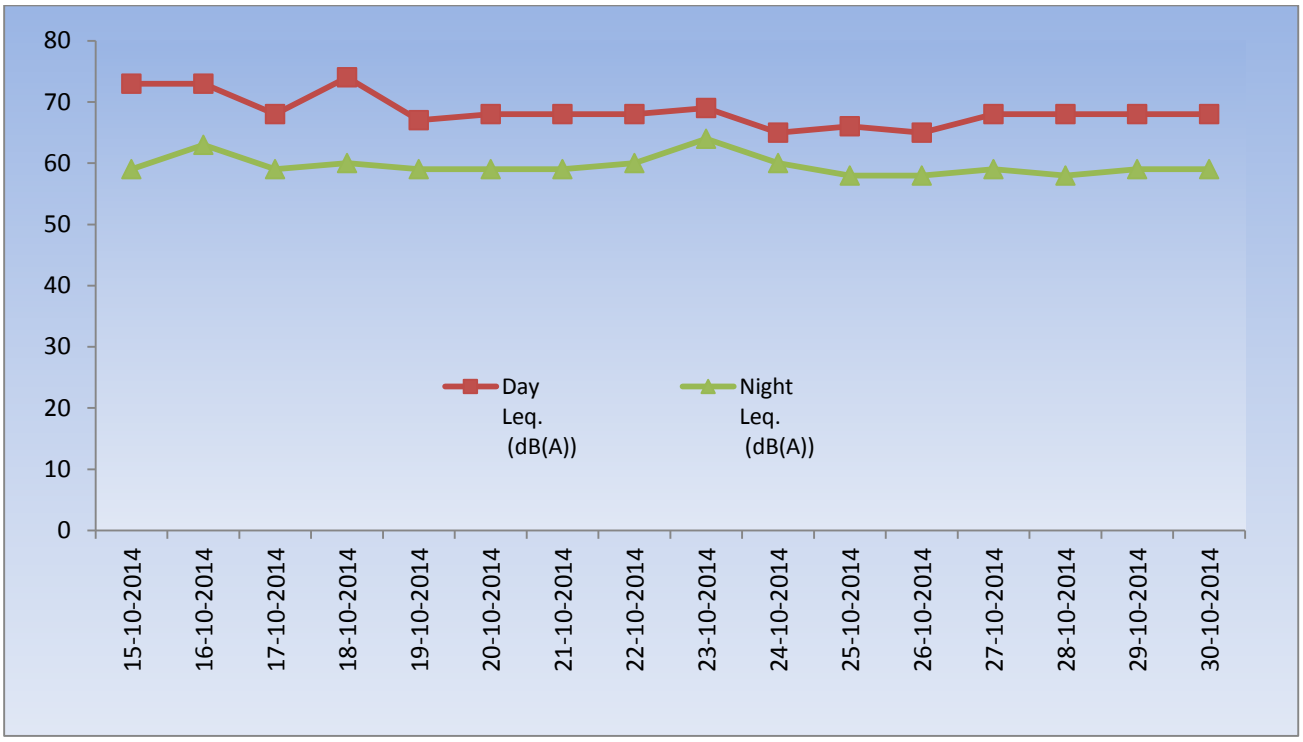

Figure 32: Ambient Noise level trend of Gomti Nagar

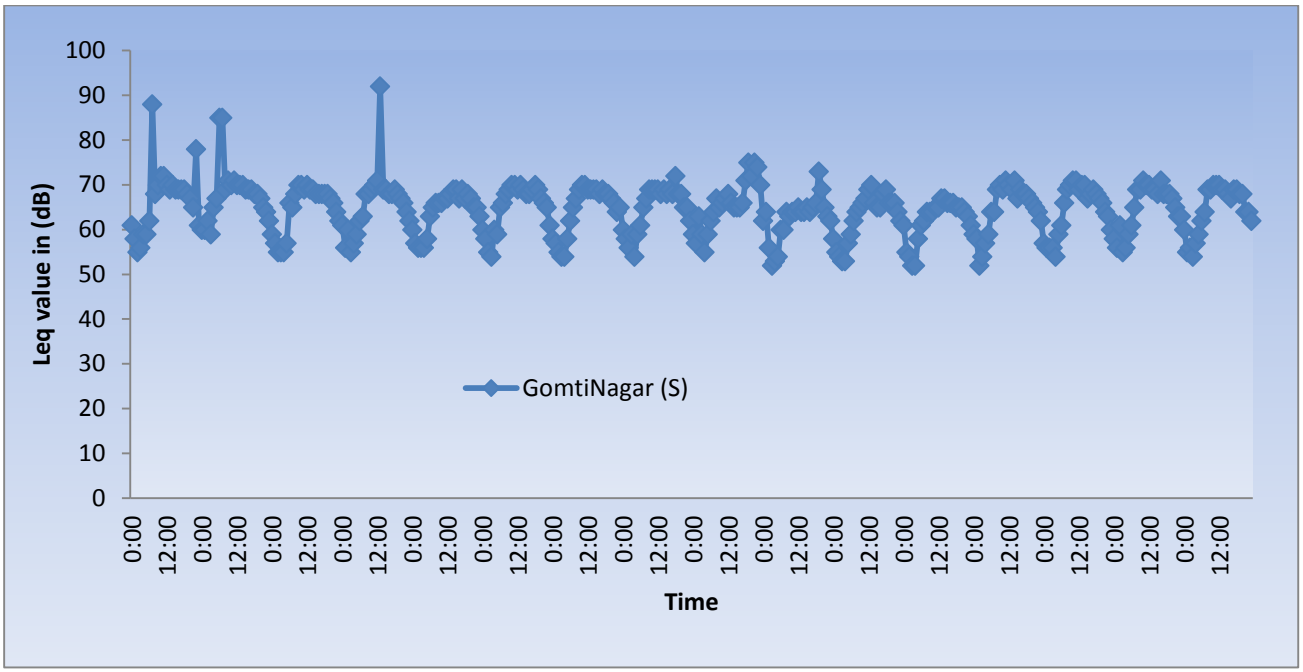

Figure 33: Ambient Noise level trend of Gomti Nagar on hourly basis

6.7 HYDERABAD

Hyderabad, the common capital of both the southern Indian states of Andhra Pradesh and Telangana, is located at 17.3700° N, 78.4800° E, and lies on hilly terrain in Southern India along the banks of the Musi River. Hyderabad is spread over an area of 650 square kilometers (250 sq mi). Current Population of Hyderabad in 2014 is **6,809,970** as per census – 2011. In Hyderabad, five monitoring stations are installed and details are depicted in table - 20 and figure - 34.

Table 20: Monitoring locations of Hyderabad

Sl. No.	Station location	Category	Latitude	Longitude
1.	Abids	Commercial	17º23' 27.42" N	78º28' 25.59" E
2.	Punjagutta	Commercial	17º25' 27.77" N	78º27' 3.74" E
3.	Jeedimetla	Industrial	17º30' 44.12" N	78º28' 10.43" E
4.	Zoo	Silence Zone	17º22' 8.44" N	78º28' 17.42" E
5.	Jublee Hills	Residential	17º26' 22.08" N	78º23' 58.28" E

Figure 34: Map shows the monitoring locations of Hyderabad

6.8 AMBIENT NOISE MONITORING DATA OF HYDERABAD'S STATION

6.8.1 NOISE MONITORING STATION AT ABIDs

The station is installed at Abids and fall under the category of commercial zone. The GPS coordinate of said site is **17º23' 27.42'' N** and **78º28' 25.59'' E**. The ambient noise monitoring data of Abids for the period 15/10/2014 to 30/10/2014 is placed in table - 21. Figure - 35 depicts the trend of Abids Station for day-night time. Hourly basis data of Abids is placed in table-4 of Annexure-I and graphical representation is shown in figure - 36.

Table 21: Ambient Noise Level Data of Abids

Date	Day Leq. (dB(A))	Day Min. (dB(A))	Day Max. (dB(A))	Night Leq. (dB(A))	Night Min. (dB(A))	Night Max. (dB(A))	Limit Day dB(A) 6AM to 10PM	Limit Day dB(AA) 10PM to 6AM
15-10-2014	78	70	82	68	62	76	65	55
16-10-2014	78	68	81	68	61	77	65	55
17-10-2014	78	70	81	69	62	77	65	55
18-10-2014	78	70	81	71	61	81	65	55
19-10-2014	77	68	82	70	63	76	65	55

20-10-2014	78	68	81	68	60	79	65	55
21-10-2014	78	69	81	69	60	78	65	55
22-10-2014	78	69	83	74	61	79	65	55
23-10-2014	80	68	**98**	73	61	**85**	65	55
24-10-2014	76	68	80	71	64	79	65	55
25-10-2014	77	68	82	67	59	75	65	55
26-10-2014	76	68	80	68	62	74	65	55
27-10-2014	78	**67**	81	67	**57**	75	65	55
28-10-2014	78	69	83	74	66	81	65	55
29-10-2014	77	69	82	67	58	76	65	55
30-10-2014	77	69	81	67	**57**	76	65	55

Close examination to above table reveals following observations:

- Sound level data at Abids always exceed the prescribed limit of 65 dB(A) day and 55 dB(A) night time.
- During day time, sound level data varies from 67 dB(A) (27/10/2014) to 98 dB(A) (23/10/2014) and during night time sound level data ranges from 57 dB(A) (27-30/10/2014) to 85 dB(A) (23/10/2014).
- Hourly basis data revels the maximum sound level of 93 dB(A) at 8.00PM during 23/10/2014 day whereas minimum sound level of 59 dB(A) was observed at 2.00 - 3.00AM during 27/10/2014.

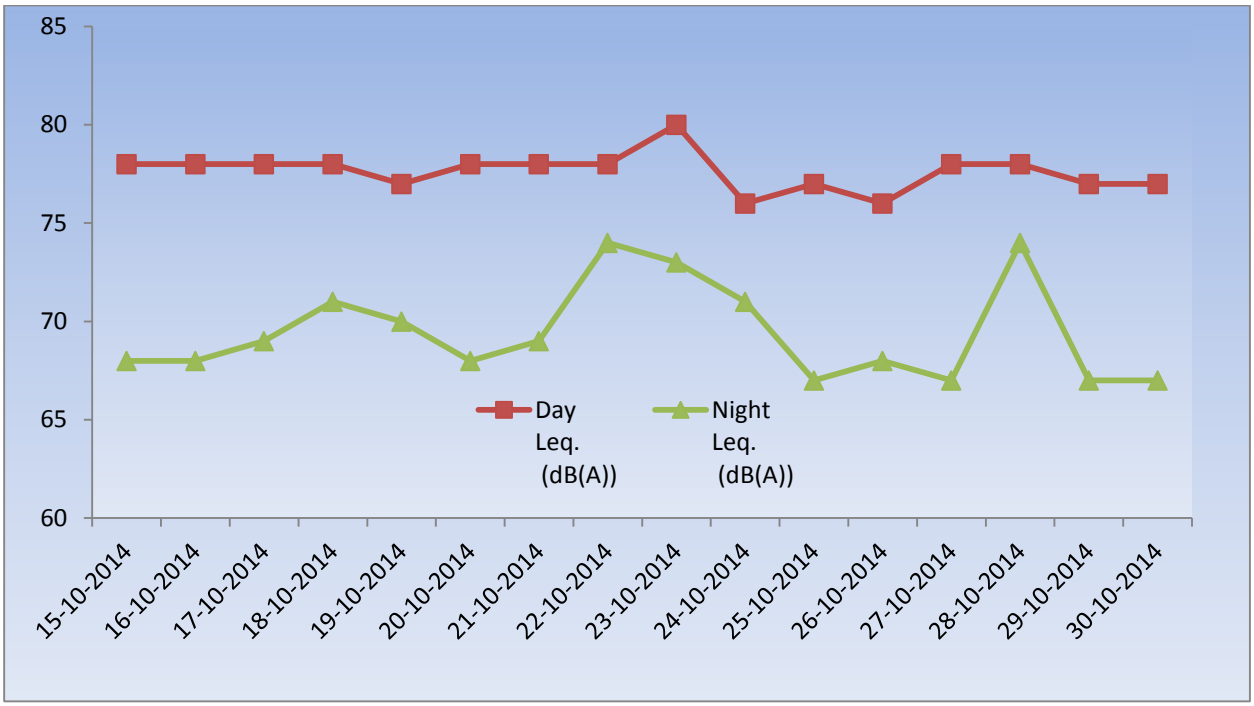

Figure 35: Ambient Noise level trend of Abids

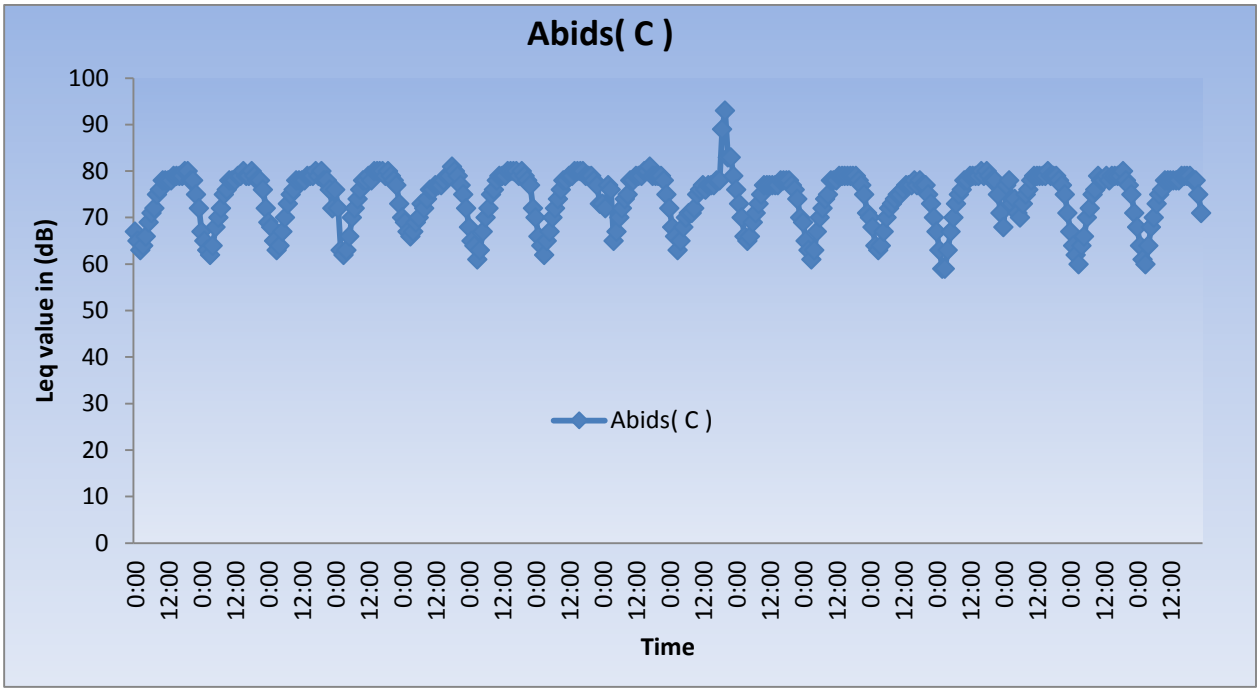

Figure 36: Ambient Noise level trend of Abids on hourly basis

6.8.2 NOISE MONITORING STATION AT PUNJAGUTTA

The noise monitoring station is installed at Punjagutta. The station fall under the category of commercial zone with GPS coordinate **17º25' 27.77'' N** and **78º27' 3.74'' E**. The ambient noise monitoring data for the period 15/10/2014 to 30/10/2014 is placed in table - 22. Figure - 37 depicts the trend of Punjagutta Station for day-night time. Hourly basis data of Punjagutta is placed in table - 4 of Annexure-I and graphical representation is shown in figure - 38.

Table 22: Ambient Noise Level Data of Punjagutta

Date	Day Leq. (dB(A))	Day Min. (dB(A))	Day Max. (dB(A))	Night Leq. (dB(A))	Night Min. (dB(A))	Night Max. (dB(A))	Limit Day dB(A) 6AM to 10PM	Limit Day dB(AA) 10PM to 6AM
15-10-2014	78	73	80	72	67	76	65	55
16-10-2014	78	73	81	72	66	76	65	55
17-10-2014	78	74	80	73	67	77	65	55
18-10-2014	78	74	80	73	69	77	65	55
19-10-2014	76	73	79	72	67	76	65	55
20-10-2014	78	74	81	72	67	78	65	55
21-10-2014	78	73	81	72	67	77	65	55
22-10-2014	78	73	82	72	66	79	65	55
23-10-2014	79	73	**91**	73	66	**84**	65	55
24-10-2014	77	**72**	80	73	68	79	65	55
25-10-2014	79	73	82	73	67	79	65	55
26-10-2014	78	74	80	72	67	76	65	55
27-10-2014	79	74	81	71	**64**	77	65	55
28-10-2014	79	74	81	71	66	77	65	55
29-10-2014	79	74	82	74	67	81	65	55
30-10-2014	79	75	81	73	66	78	65	55

Close examination to above table reveals following observations:

- Sound level data of Punjagutta always exceed the prescribed limit of 65 dB (A) (day time) and of 55 dB (A) (night time).
- During day time, sound level data varies from 72 dB(A) (24/10/2014) to 91 dB(A) (23/10/2014) and during night time sound level data ranges from 64 dB(A) (27/10/2014) to 84 dB(A) (23/10/2014).

- Hourly basis data revels the maximum sound level of 88 dB(A) at 09.00 PM during 23/10/2014 whereas minimum sound level of 66 dB(A) was observed at 3.00 AM during 27/10/2014.

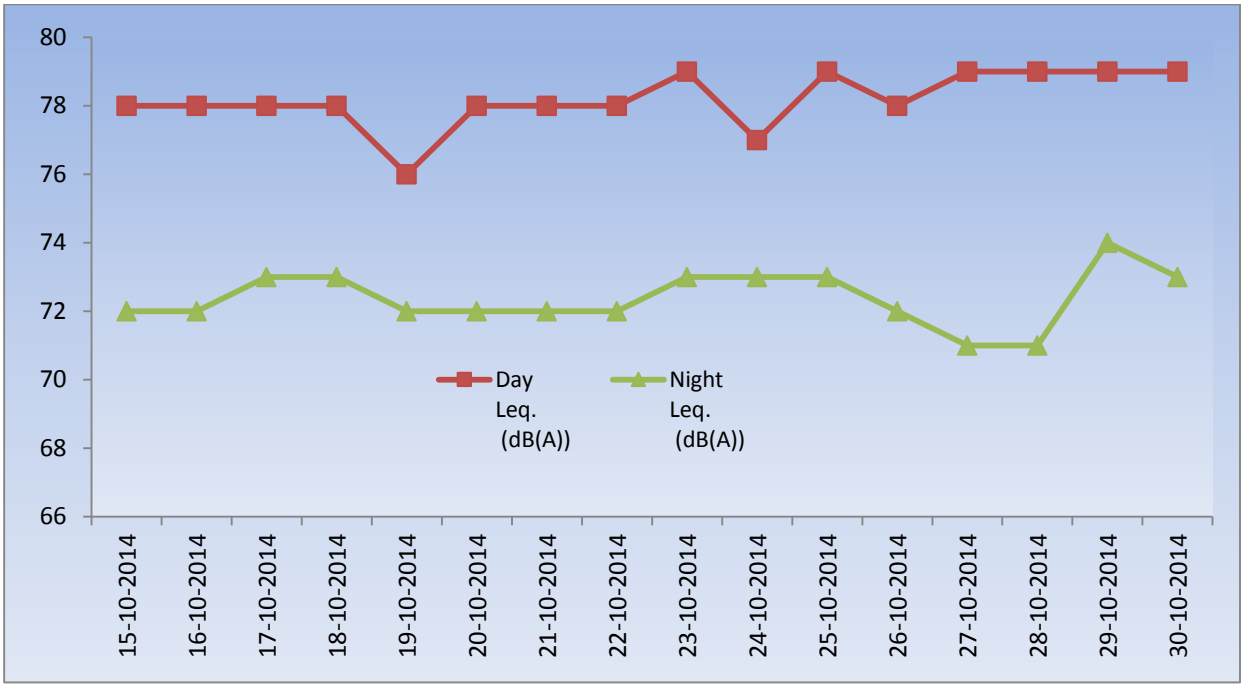

Figure 37: Ambient Noise level trend of Punjagutta

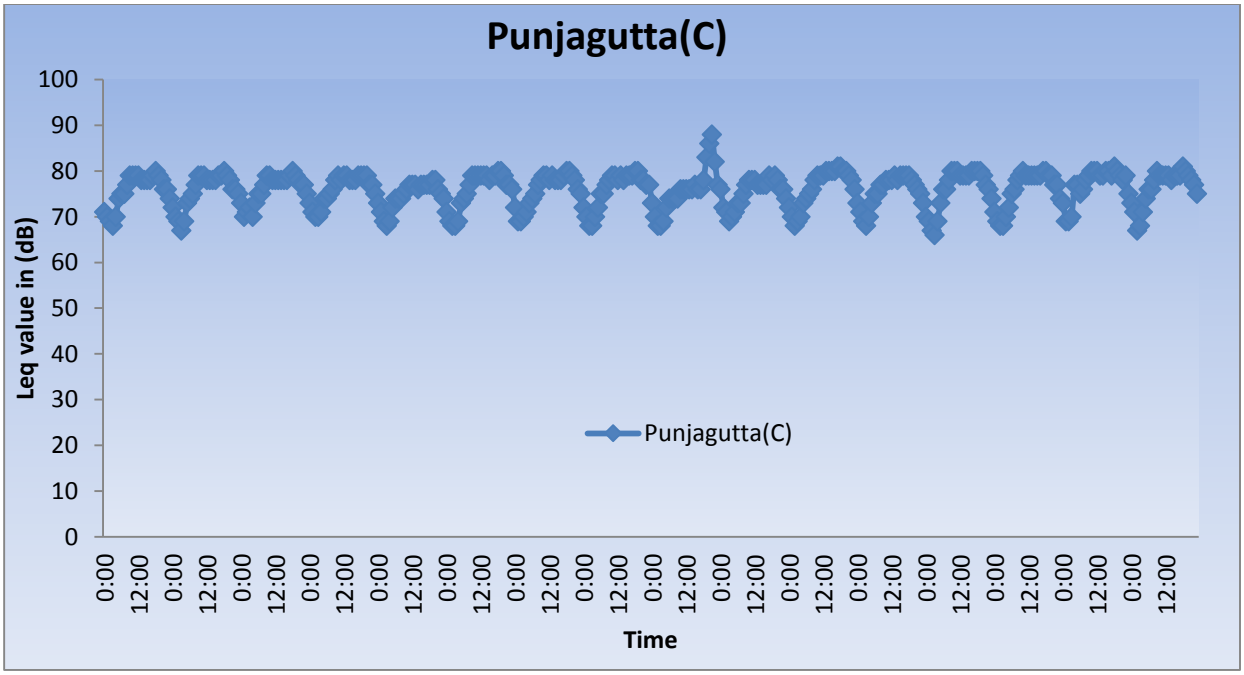

Figure 38: Ambient Noise level trend of Punjagutta on hourly basis

6.8.3 NOISE MONITORING STATION AT JEEDIMETLA

The noise monitoring station is installed in Jeedimetla. The station fall under the category of Industrial zone having GPS coordinate **17°30' 44.12'' N** and **78°28' 10.43'' E**. The ambient noise monitoring data for the period 15/10/2014 to 30/10/2014 is placed in table - 23. Figure - 39 show the trend of Jeedimetla Station for day-night time. Hourly basis data of Jeedimetla is mentioned in table - 4 of Annexure-I and graphical representation is shown in figure - 40.

Table 23: Ambient Noise Level Data of Jeedimetla

Date	Day Leq. (dB(A))	Day Min. (dB(A))	Day Max. (dB(A))	Night Leq. (dB(A))	Night Min. (dB(A))	Night Max. (dB(A))	Limit Day dB(A) 6AM to 10PM	Limit Day dB(AA) 10PM to 6AM
15-10-2014	65	58	69	57	56	61	75	70
16-10-2014	65	59	**72**	57	55	62	75	70
17-10-2014	65	57	69	58	55	61	75	70
18-10-2014	65	58	71	57	55	61	75	70
19-10-2014	66	57	69	59	55	65	75	70
20-10-2014	66	60	70	63	63	65	75	70
21-10-2014	66	59	70	63	57	**67**	75	70
22-10-2014	66	58	**72**	57	56	60	75	70
23-10-2014	64	58	**72**	59	56	64	75	70
24-10-2014	65	60	69	58	56	61	75	70
25-10-2014	66	59	70	58	56	61	75	70
26-10-2014	63	**56**	67	57	55	60	75	70
27-10-2014	63	57	68	55	**54**	59	75	70
28-10-2014	66	58	70	57	**54**	63	75	70
29-10-2014	66	59	70	59	57	63	75	70
30-10-2014	66	61	69	60	58	63	75	70

Close examination to above data reveals following observations:

- At Jeedimetla, Sound level data not exceed the prescribed limit of 75 dB (A) (day time) and of 70 dB (A) (night time).

- Sound level data varies from 56 dB (A) (26/10/2014) to 72 dB (A) (16, 22-23/10/2014) for day time and during night time sound level data ranges from 54 dB (A) (27-28/10/2014) to 67 dB (A) (21/10/2014).
- Hourly basis data revels the maximum sound level of 70 dB (A) at 12.00PM during 16/10/2014 whereas minimum sound level of 54 dB (A) was observed at various occasion.

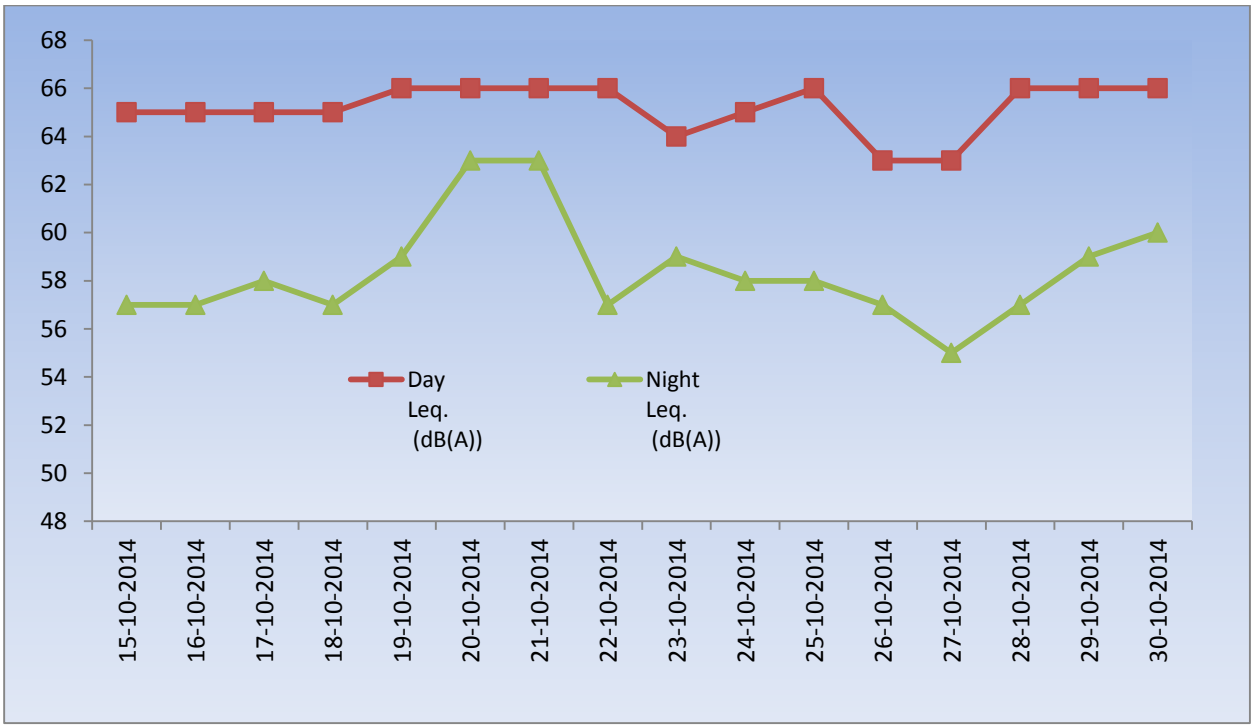

Figure 39: Ambient Noise level trend of Jeedimetla

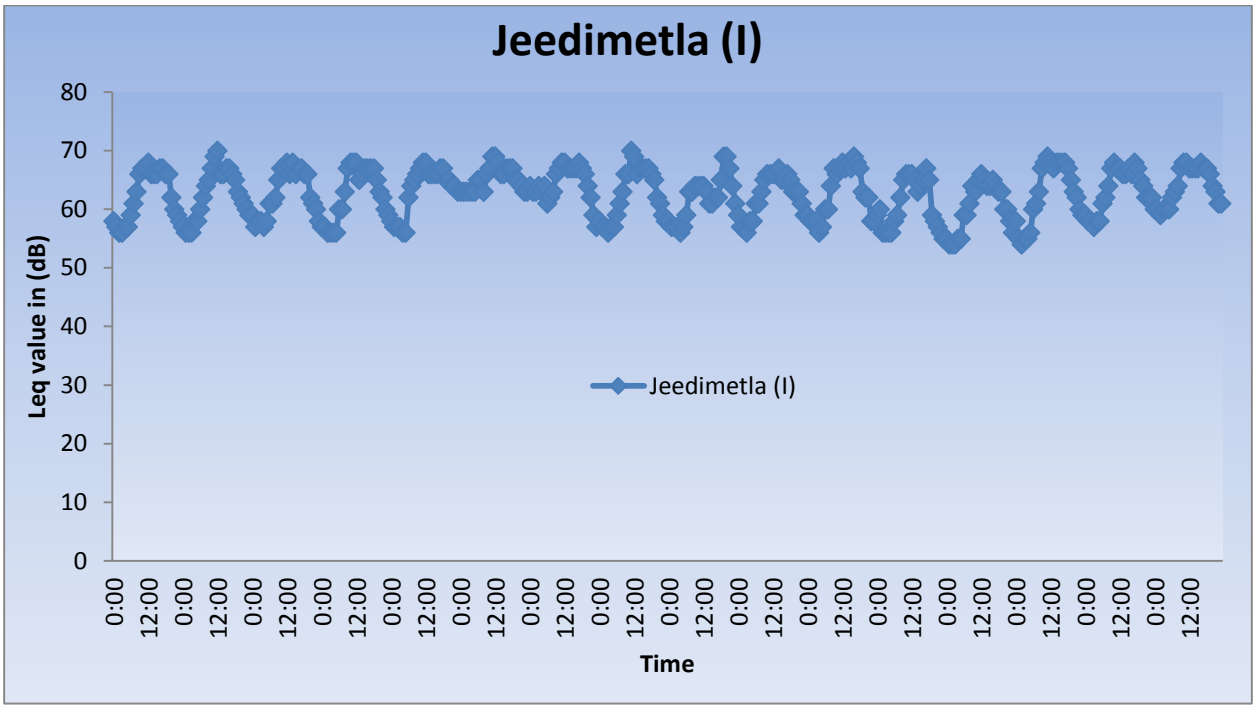

Figure 40: Ambient Noise level trend of Jeedimetla on hourly basis

6.8.4 NOISE MONITORING STATION AT ZOO

The noise monitoring station is installed at ZOO. The station fall under the category of silence zone having prescribed limits of 50 dB(A) for day time and 40 dB (A) for night time. The GPS coordinate **17°22' 8.44'' N** and **78°28' 17.42'' E**. The ambient noise monitoring data for the period 15/10/2014 to 30/10/2014 is placed in table - 24. Figure - 41 show the trend of ZOO Station for day-night time. Hourly basis data of ZOO is mentioned in table - 4 of Annexure-I and graphical representation is shown in figure - 42.

Table 24: Ambient Noise Level Data of ZOO

Date	Day Leq. (dB(A))	Day Min. (dB(A))	Day Max. (dB(A))	Night Leq. (dB(A))	Night Min. (dB(A))	Night Max. (dB(A))	Limit Day dB(A) 6AM to 10PM	Limit Day dB(AA) 10PM to 6AM
15-10-2014	55	51	62	50	46	62	50	40
16-10-2014	55	51	64	50	46	64	50	40
17-10-2014	58	51	**74**	50	47	62	50	40
18-10-2014	56	49	65	50	45	64	50	40
19-10-2014	55	49	61	50	44	65	50	40
20-10-2014	55	51	60	49	45	60	50	40

21-10-2014	55	51	60	49	45	60	50	40
22-10-2014	56	49	61	49	45	59	50	40
23-10-2014	58	50	68	56	45	68	50	40
24-10-2014	58	50	62	55	45	64	50	40
25-10-2014	56	50	62	50	46	60	50	40
26-10-2014	55	49	61	50	46	62	50	40
27-10-2014	54	**48**	64	48	**41**	62	50	40
28-10-2014	55	51	64	49	44	65	50	40
29-10-2014	55	50	63	50	44	**69**	50	40
30-10-2014	56	51	66	51	45	66	50	40

Close examination to above data reveals following observations:

- Sound level data at ZOO always exceed the prescribed limit of day and night time.
- Sound level data varies from 48 dB (A) (27/10/2014) to 74 dB (A) (16/10/2014) for day time and during night time sound level data ranges from 41 dB (A) (27/10/2014) to 69 dB (A) (29/10/2014).
- Hourly basis data revels the maximum sound level of 93 dB (A) at 10.00A.M during 22/10/2014 whereas minimum sound level of 65 dB (A) was observed at various occasion.

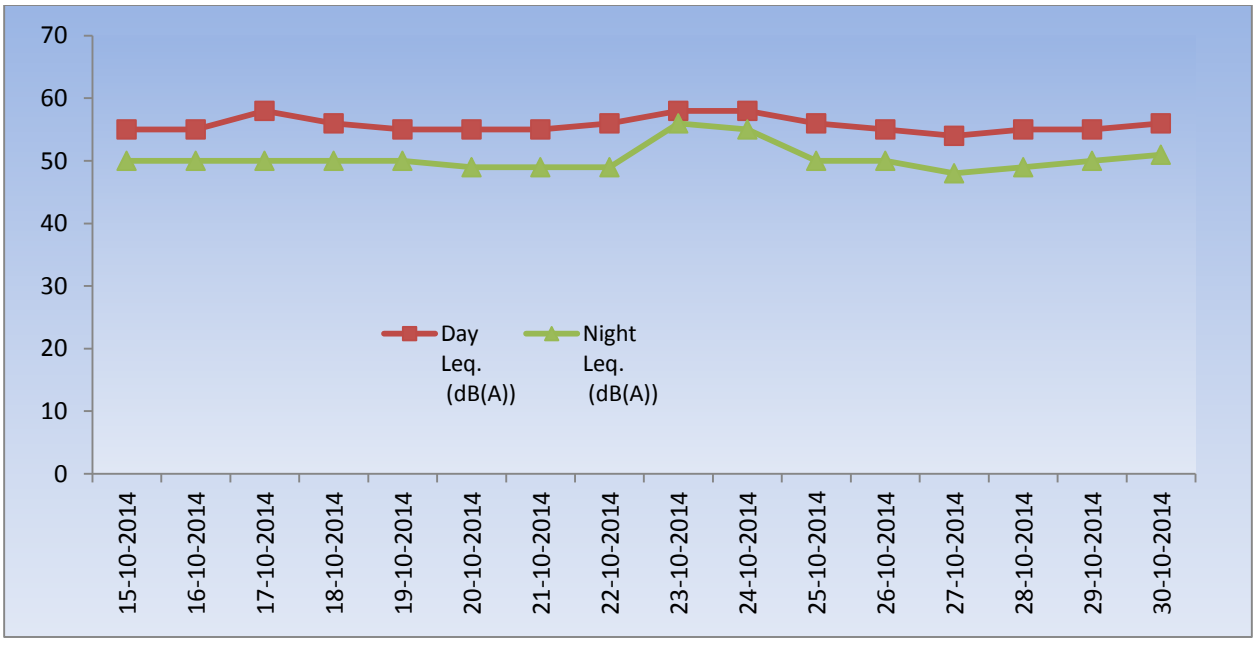

Figure 41: Ambient Noise level trend of Zoo

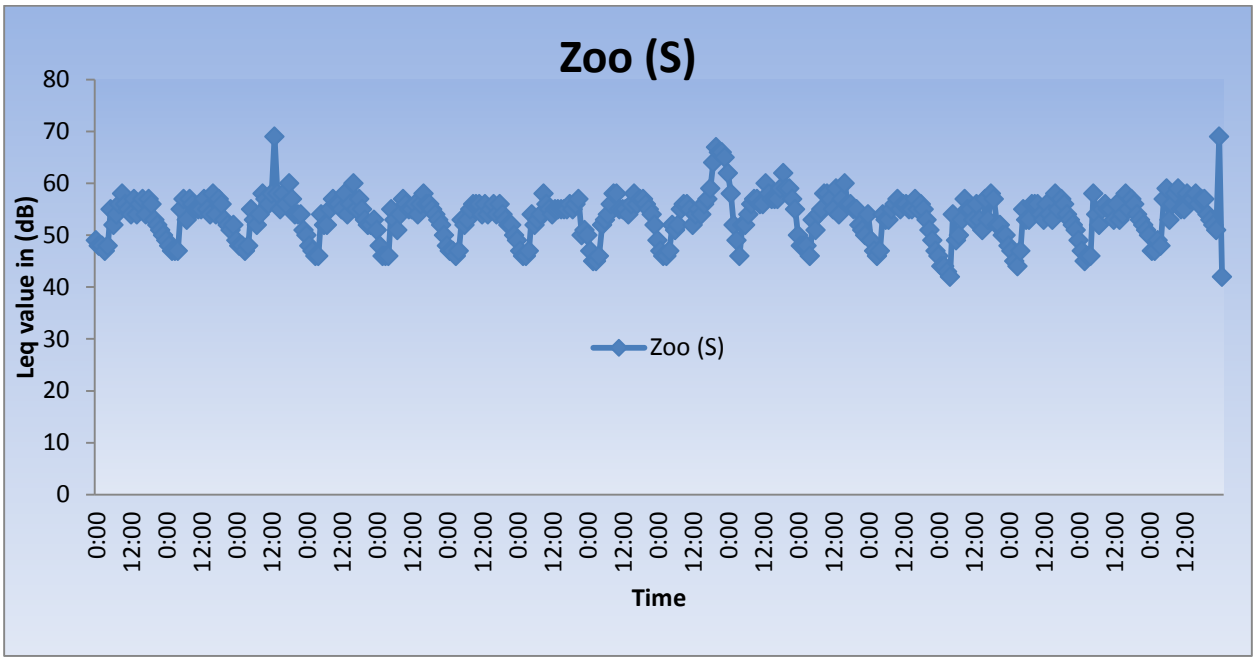

Figure 42: Ambient Noise level trend of Zoo on hourly basis

6.8.5 NOISE MONITORING STATION AT JUBLEE HILLS

The noise monitoring station is installed at Jublee Hills and station comes into category of residential zone having prescribed limits of 55 dB(A) for day time and 45 dB (A) for night time. The GPS coordinate **17°26' 22.08'' N** and **78°23' 58.28'' E**. The ambient noise monitoring data for the period 15/10/2014 to 30/10/2014 is placed in table - 25. Figure - 43 show the trend of Jublee Hills Station for day-night time. Hourly basis data of Jublee Hills is mentioned in table - 4 of Annexure-I and graphical representation is shown in figure - 44.

Table 25: Ambient Noise Level Data of Jublee Hills

Date	Day Leq. (dB(A))	Day Min. (dB(A))	Day Max. (dB(A))	Night Leq. (dB(A))	Night Min. (dB(A))	Night Max. (dB(A))	Limit Day dB(A) 6AM to 10PM	Limit Day dB(AA) 10PM to 6AM
15-10-2014	60	55	64	51	46	59	55	45
16-10-2014	60	54	66	50	46	58	55	45
17-10-2014	61	54	67	50	42	61	55	45
18-10-2014	60	52	65	51	44	60	55	45

19-10-2014	58	54	61	50	42	56	55	45
20-10-2014	60	**51**	66	50	42	59	55	45
21-10-2014	60	52	63	50	44	58	55	45
22-10-2014	62	52	**84**	53	43	67	55	45
23-10-2014	63	52	77	59	44	**74**	55	45
24-10-2014	60	**51**	65	54	45	65	55	45
25-10-2014	59	53	63	50	44	59	55	45
26-10-2014	57	**51**	61	53	45	59	55	45
27-10-2014	59	**51**	65	51	**41**	58	55	45
28-10-2014	59	53	64	50	43	58	55	45
29-10-2014	59	54	62	51	45	58	55	45
30-10-2014	60	54	63	51	45	58	55	45

Close examination to above data reveals following observations:

- Sound level data at Jublee Hills always exceed the prescribed limit of day and night time.
- Sound level data ranges from 51 dB (A) (20, 24, 26-27/10/2014) to 84 dB (A) (22/10/2014) for day time and during night time sound level data varies from 41 dB (A) (27/10/2014) to 74 dB (A) (23/10/2014).
- Hourly basis data shows that the maximum sound level of 75 dB (A) at 08.00 P.M during 23/10/2014 whereas minimum sound level of 43 dB (A) was observed at various occasions.

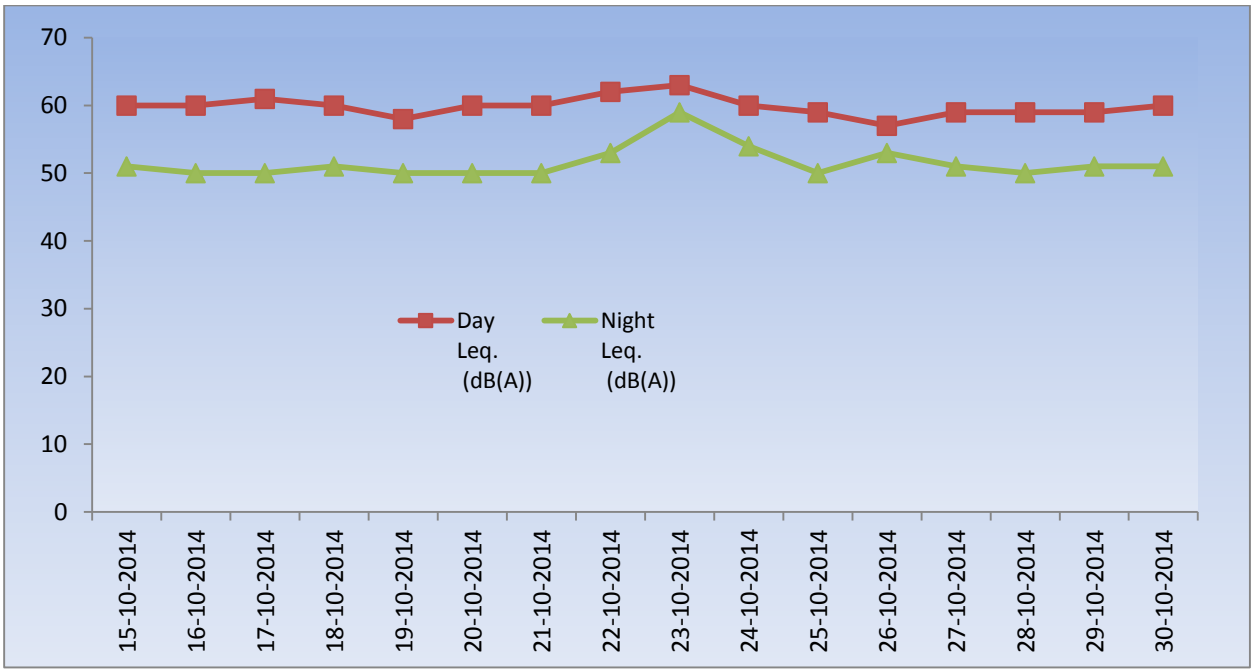

Figure 43: Ambient Noise level trend of Jublee hills

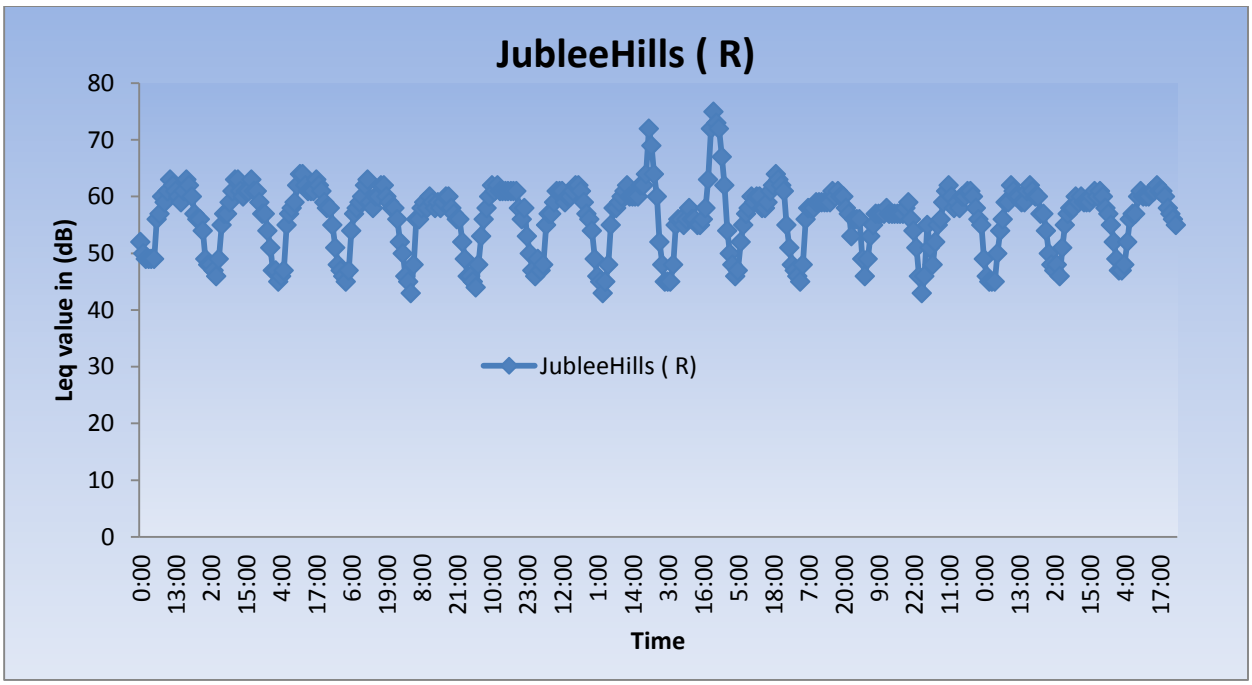

Figure 44: Ambient Noise level trend of Jublee Hills on hourly basis

6.9 BANGLORE

Banglore, officially known as Bengaluru, the capital of the Indian state of Karnataka, is located at 12.9667° N, 77.5667° E and lies in the Southeastern region in the Deccan Plateau.

Benglore is spread over an area of 741 sq. kilometers. Current Population of Bangalore in 2014 is **10,178,146** as per census-2011. In Banglore, five monitoring stations are installed and details are depicted in table - 26 and figure - 45.

Table 26: Monitoring locations of Banglore

Sl. No.	Station location	Category	Latitude	Longitude
1.	Parisar Bhawan	Commercial	12º58' 32.18" N	77º36' 12.38" E
2.	Peeniya	Industrial	13º1' 4.28" N	77º30' 11.45" E
3.	Nisarga bhawan	Residential	12º59' 0.54" N	77º35' 40.15" E
4.	Marathali	Commercial	12º54' 45.45" N	77º34' 34.58" E
5.	BTM	Residential	12º54' 30.36" N	77º35' 10.96" E

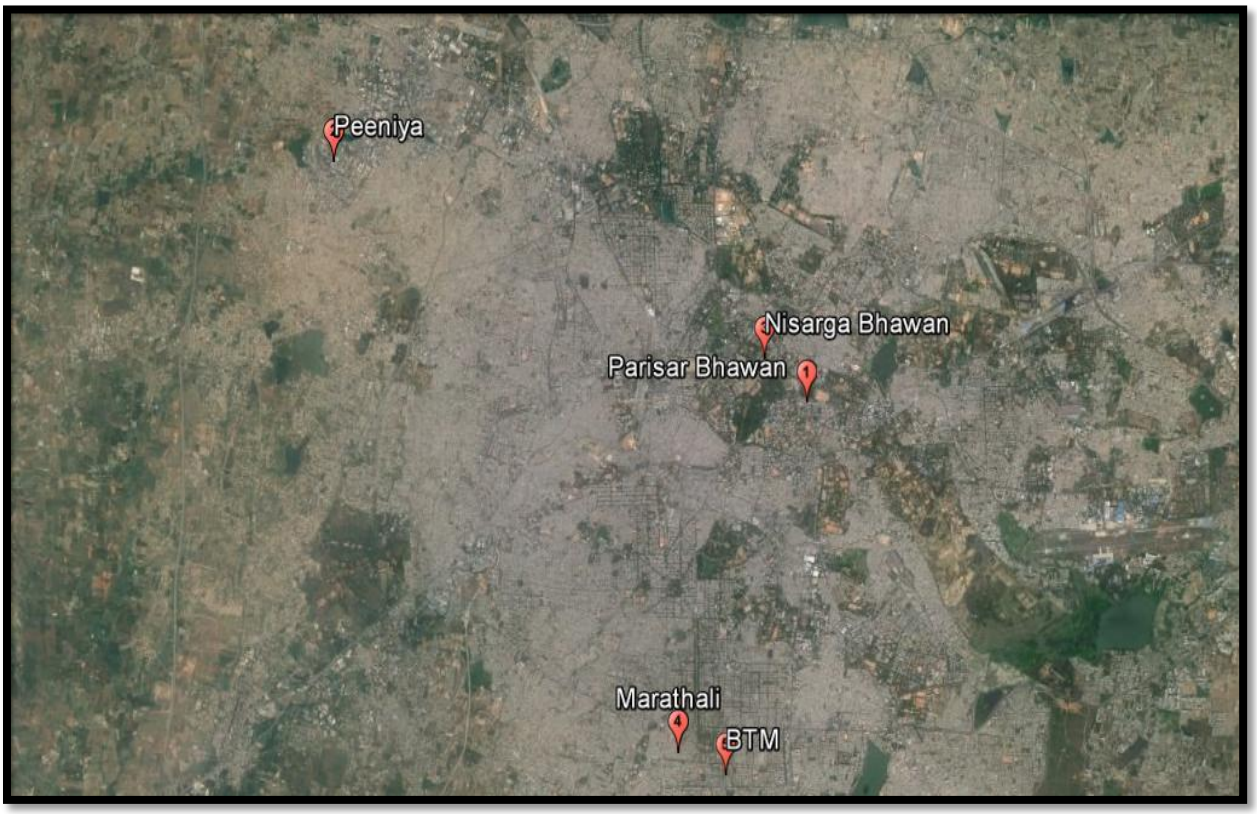

Figure 45: Map shows the monitoring locations of Banglore

6.10 AMBIENT NOISE MONITORING DATA OF BANGLORE'S STATION

6.10.1 NOISE MONITORING STATION AT PARISAR BHAWAN

The station is installed at Parisar Bhawan and fall under the category of Commercial Zone. The GPS coordinate of said site is **12º58' 32.18'' N** and **77º36' 12.38'' E**. The ambient noise monitoring data of Parisar Bhawan for the period 15/10/2014 to 30/10/2014 is placed in table - 27. Figure - 46 depicts the trend of Parisar Bhawan Station

for day-night time. Hourly basis data of Parisar Bhawan is placed in table - 5 of Annexure-I and graphical representation is shown in figure - 47.

Table 27: Ambient Noise Level Data of Parisar Bhawan

Date	Day Leq. (dB(A))	Day Min. (dB(A))	Day Max. (dB(A))	Night Leq. (dB(A))	Night Min. (dB(A))	Night Max. (dB(A))	Limit Day dB(A) 6AM to 10PM	Limit Day dB(AA) 10PM to 6AM
15-10-2014	67	55	70	58	**50**	65	65	55
16-10-2014	67	57	71	59	52	65	65	55
17-10-2014	68	56	72	59	52	66	65	55
18-10-2014	68	55	73	61	52	66	65	55
19-10-2014	64	56	71	60	52	66	65	55
20-10-2014	67	57	71	57	**50**	64	65	55
21-10-2014	68	56	72	58	52	65	65	55
22-10-2014	65	57	69	58	53	63	65	55
23-10-2014	67	56	**82**	59	53	**70**	65	55
24-10-2014	64	**54**	69	58	**50**	65	65	55
25-10-2014	66	58	72	59	51	64	65	55
26-10-2014	64	55	68	59	52	65	65	55
27-10-2014	67	56	70	59	**50**	68	65	55
28-10-2014	67	56	70	58	**50**	65	65	55
29-10-2014	67	56	72	57	**50**	65	65	55
30-10-2014	67	58	71	59	53	64	65	55

Close examination to above table reveals following observations:

- Out of 16 days observations, 12 times sound level data exceed the prescribed limit of 65 dB (A) (day time) whereas sound level always above the prescribe limits of 55 dB(A) (night time).
- During day time, sound level data varies from 54 dB(A) (24/10/2014) to 82 dB(A) (23/10/2014) and during night time sound level data ranges from 50 dB(A) (15, 20, 24, 27, 28-29/10/2014) to 70 dB(A) (23/10/2014).
- Hourly basis data revels the maximum sound level of 75 dB(A) at 7.00 PM during Deepawali day whereas minimum sound level of 50 dB(A) was observed at 3.00 AM during 27/10/2014.

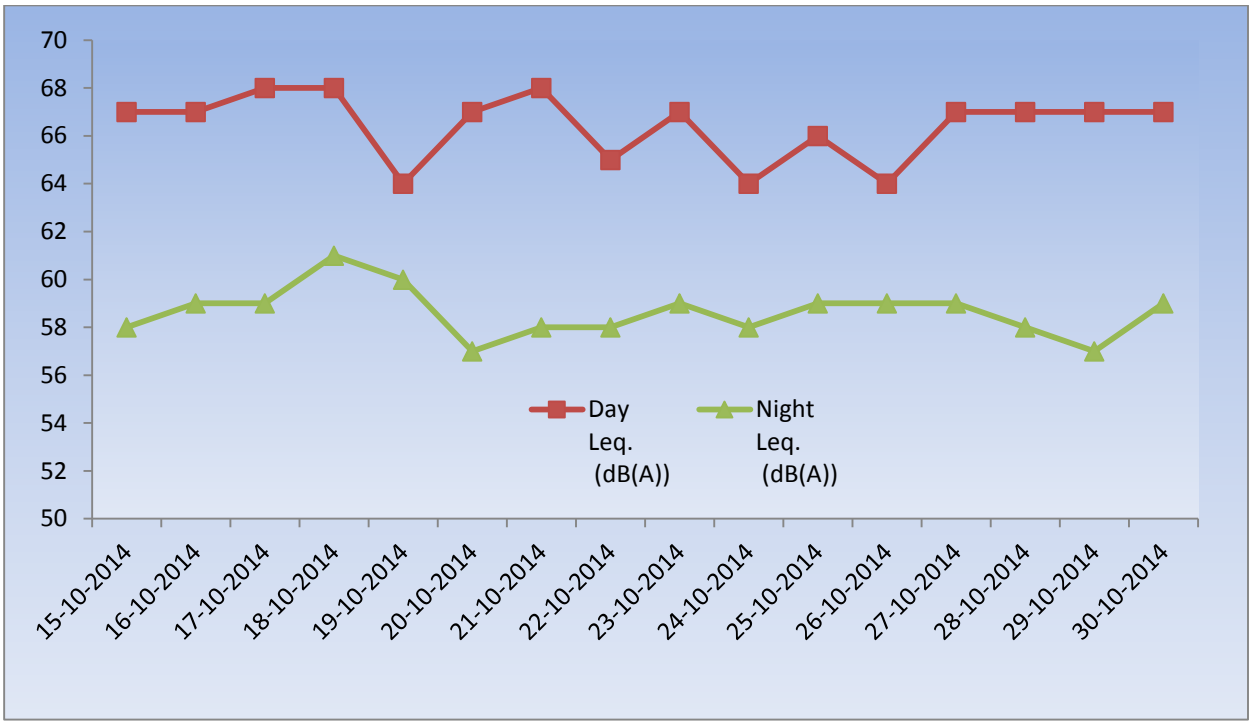

Figure 46: Ambient Noise level trend of Parisar Bhawan

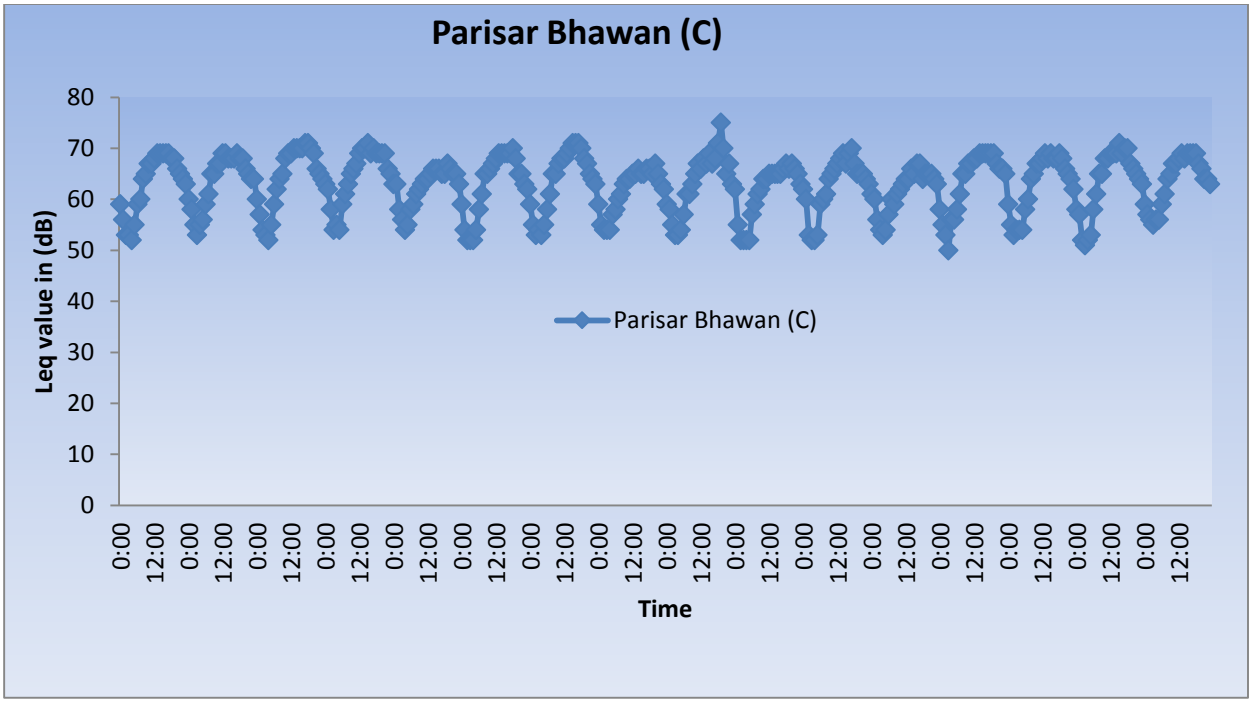

Figure 47: Ambient Noise level trend of Parisar Bhawan on hourly basis

6.10.2 NOISE MONITORING STATION AT PEENYA

The noise monitoring station is installed at Peenya. The station fall under the category of Industrial zone with GPS coordinate **13º1' 4.28'' N** and **77º30' 11.45'' E**. The ambient noise monitoring data for the period 15/10/2014 to 30/10/2014 is placed in table - 28. Figure - 48 depicts the trend of Peenya Station for day-night time. Hourly basis data of Peenya is placed in table - 5 of Annexure-I and graphical representation is shown in figure - 49.

Table 28: Ambient Noise Level Data of Peenya

Date	Day Leq. (dB(A))	Day Min. (dB(A))	Day Max. (dB(A))	Night Leq. (dB(A))	Night Min. (dB(A))	Night Max. (dB(A))	Limit Day dB(A) 6AM to 10PM	Limit Day dB(AA) 10PM to 6AM
15-10-2014	60	55	65	59	58	61	75	70
16-10-2014	60	53	62	58	57	60	75	70
17-10-2014	61	53	**70**	59	57	61	75	70
18-10-2014	60	54	66	59	57	63	75	70
19-10-2014	59	**50**	65	61	58	63	75	70
20-10-2014	61	54	64	59	56	63	75	70
21-10-2014	60	54	64	59	57	61	75	70
22-10-2014	59	54	69	60	58	62	75	70
23-10-2014	61	55	66	61	59	64	75	70
24-10-2014	62	54	69	62	59	65	75	70
25-10-2014	61	54	**70**	61	59	63	75	70
26-10-2014	58	50	63	61	60	63	75	70
27-10-2014	60	54	63	61	**55**	**71**	75	70
28-10-2014	61	54	67	61	58	63	75	70
29-10-2014	60	54	64	61	57	64	75	70
30-10-2014	60	54	63	60	57	62	75	70

Close examination to above table reveals following observations:

- Sound level data of Peenya in the prescribed limit of 75 dB(A) (day time) and of 70 dB(A) (night time).

- During day time, sound level data varies from 50 dB(A) (19/10/2014) to 70 dB(A) (25/10/2014) and during night time sound level data ranges from 55 dB(A) (27/10/2014) to 71 dB(A) (27/10/2014).
- Hourly basis data revels the maximum sound level of 68dB(A) at 07.00 PM, 03.00 AM during 24/10/2014& 27/10/2014 whereas minimum sound level of 66 dB(A) was observed at 10.00 AM during 26/10/2014.

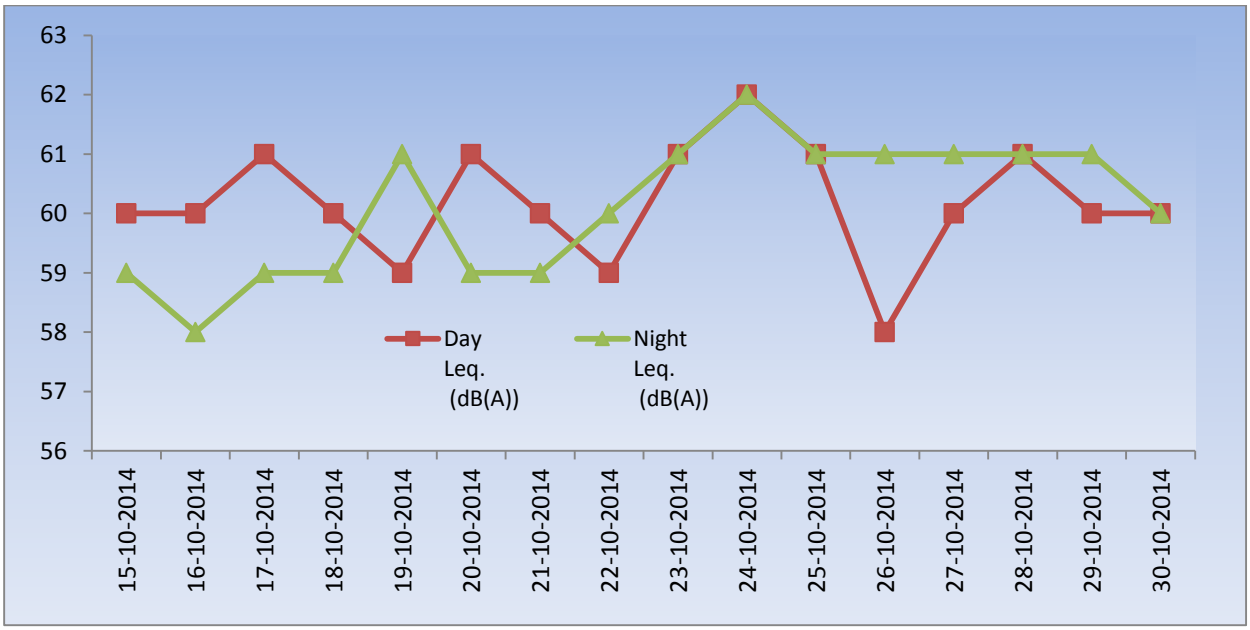

Figure 48: Ambient Noise level trend of Peenya

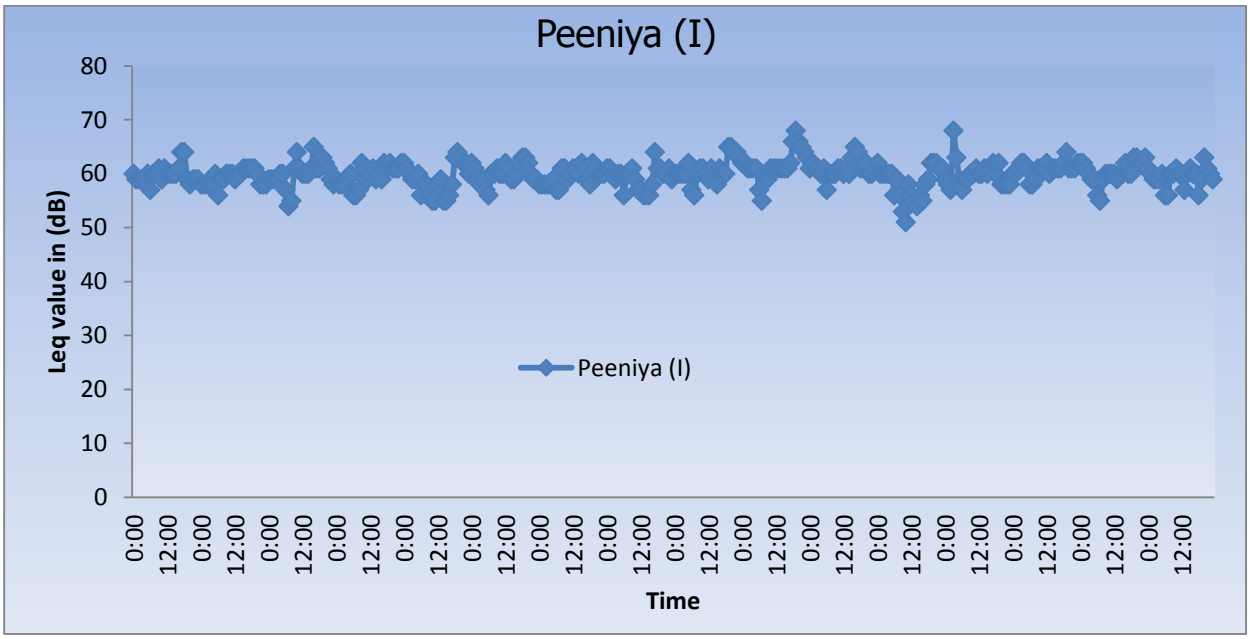

Figure 49: Ambient Noise level trend of Peenya on hourly basis

6.10.3 NOISE MONITORING STATION AT NISARGA BHAWAN

The noise monitoring station is installed in Nisarga Bhawan. The station fall under the category of Residential zone having GPS coordinate **12°59' 0.54'' N** and **77°35' 40.15'' E**. The ambient noise monitoring data for the period 15/10/2014 to 30/10/2014 is placed in table - 29. Figure - 50 show the trend of Nisarga Bhawan Station for day-night time. Hourly basis data of Nisarga Bhawan is mentioned in table - 5 of Annexure-I and graphical representation is shown in figure - 51.

Table 29: Ambient Noise Level Data of Nisarga Bhawan

Date	Day Leq. (dB(A))	Day Min. (dB(A))	Day Max. (dB(A))	Night Leq. (dB(A))	Night Min. (dB(A))	Night Max. (dB(A))	Limit Day dB(A) 6AM to 10PM	Limit Day dB(AA) 10PM to 6AM
15-10-2014	60	49	71	50	47	55	55	45
16-10-2014	56	50	68	49	45	56	55	45
17-10-2014	56	49	73	49	45	53	55	45
18-10-2014	56	49	69	49	46	57	55	45
19-10-2014	57	49	68	51	47	61	55	45
20-10-2014	56	49	68	49	46	53	55	45
21-10-2014	57	49	70	50	46	58	55	45
22-10-2014	58	49	65	49	45	61	55	45
23-10-2014	65	49	76	55	45	**71**	55	45
24-10-2014	66	49	**78**	57	45	**71**	55	45
25-10-2014	57	49	71	51	46	64	55	45
26-10-2014	58	49	70	48	45	56	55	45
27-10-2014	54	**48**	64	53	45	67	55	45
28-10-2014	54	50	58	48	45	51	55	45
29-10-2014	54	49	58	48	45	61	55	45
30-10-2014	54	49	63	48	**43**	61	55	45

Close examination to above data reveals following observations:

- At Nisarga Bhawan, Sound level data exceed the prescribed limit of 55 dB (A) (day time) for 12 days whereas sound level always above the prescribe limits of 45 dB (A) (night time).

- Sound level data varies from 48 dB(A) (27/10/2014) to 78 dB(A) (24/10/2014) for day time and during night time sound level data ranges from 43 dB(A) (30/10/2014) to 71 dB(A) (23-24/10/2014).
- Hourly basis data revels the maximum sound level of 76 dB(A) at 07.00 PM during 24/10/2014 whereas minimum sound level of 43 dB(A) was observed at 04.00 A.M during 30/10/2014.

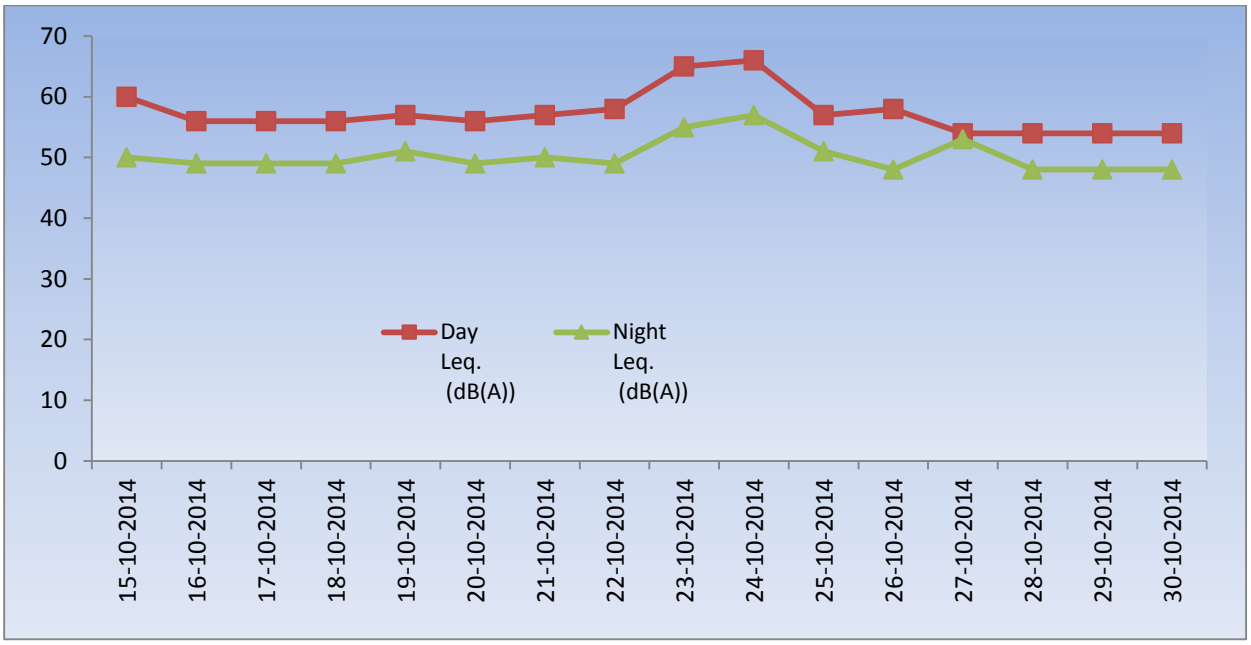

Figure 50: Ambient Noise level trend of Nisarga Bhawan

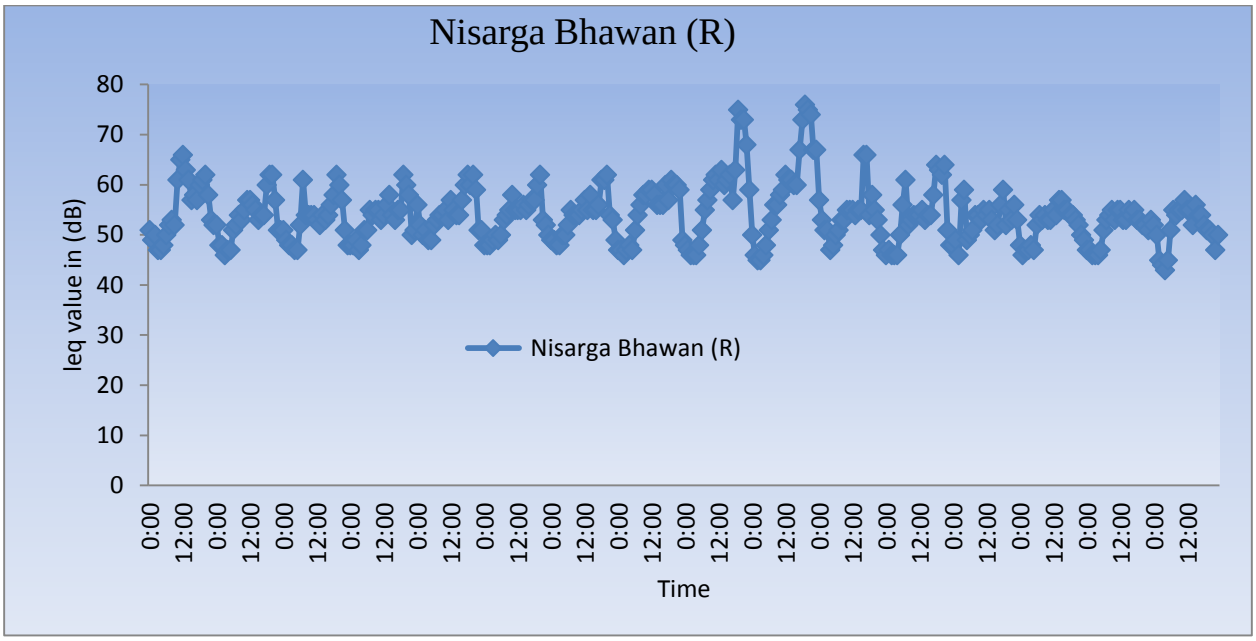

Figure 51: Ambient Noise level trend of Nisarga Bhawan on hourly basis

6.10.4 NOISE MONITORING STATION AT MARATHALI

The noise monitoring station is installed at Marathali. The station fall under the category of commercial zone having prescribed limits of 65 dB(A) for day time and 55 dB(A) for night time. The GPS coordinate **12°54' 45.45'' N** and **77°34' 34.58'' E**. The ambient noise monitoring data for the period 15/10/2014 to 30/10/2014 is placed in table - 30. Figure - 52 show the trend of Marathali Station for day-night time. Hourly basis data of Marathali is mentioned in table - 5 of Annexure-I and graphical representation is shown in figure - 53.

Table 30: Ambient Noise Level Data of Marathali

Date	Day Leq. (dB(A))	Day Min. (dB(A))	Day Max. (dB(A))	Night Leq. (dB(A))	Night Min. (dB(A))	Night Max. (dB(A))	Limit Day dB(A) 6AM to 10PM	Limit Day dB(AA) 10PM to 6AM
15-10-2014	61	55	64	58	56	62	65	55
16-10-2014	61	59	64	58	57	61	65	55
17-10-2014	60	56	64	56	53	61	65	55
18-10-2014	60	57	67	56	54	59	65	55
19-10-2014	59	56	63	56	**52**	59	65	55
20-10-2014	62	59	64	58	57	64	65	55
21-10-2014	62	60	65	58	57	61	65	55
22-10-2014	62	59	67	58	57	62	65	55

23-10-2014	64	57	**73**	59	57	**66**	65	55
24-10-2014	61	58	67	58	56	61	65	55
25-10-2014	60	57	66	58	57	61	65	55
26-10-2014	59	**53**	65	59	55	61	65	55
27-10-2014	61	58	68	59	57	63	65	55
28-10-2014	61	58	66	61	58	66	65	55
29-10-2014	60	54	63	59	57	62	65	55
30-10-2014	60	58	64	59	57	60	65	55

Close examination to above data reveals following observations:

- Sound level data at Marathali not exceed the prescribed limit of day and always exceed the prescribed limit of night time.
- Sound level data varies from 53 dB(A) (26/10/2014) to 73 dB(A) (23/10/2014) for day time and during night time sound level data ranges from 52 dB(A) (19/10/2014) to 66 dB(A) (23/10/2014).
- Hourly basis data revels the maximum sound level of 71 dB(A) at 07.00 P.M during 23/10/2014 whereas minimum sound level of 53 dB(A) was observed at 04.00 A.M during 19/10/2014.

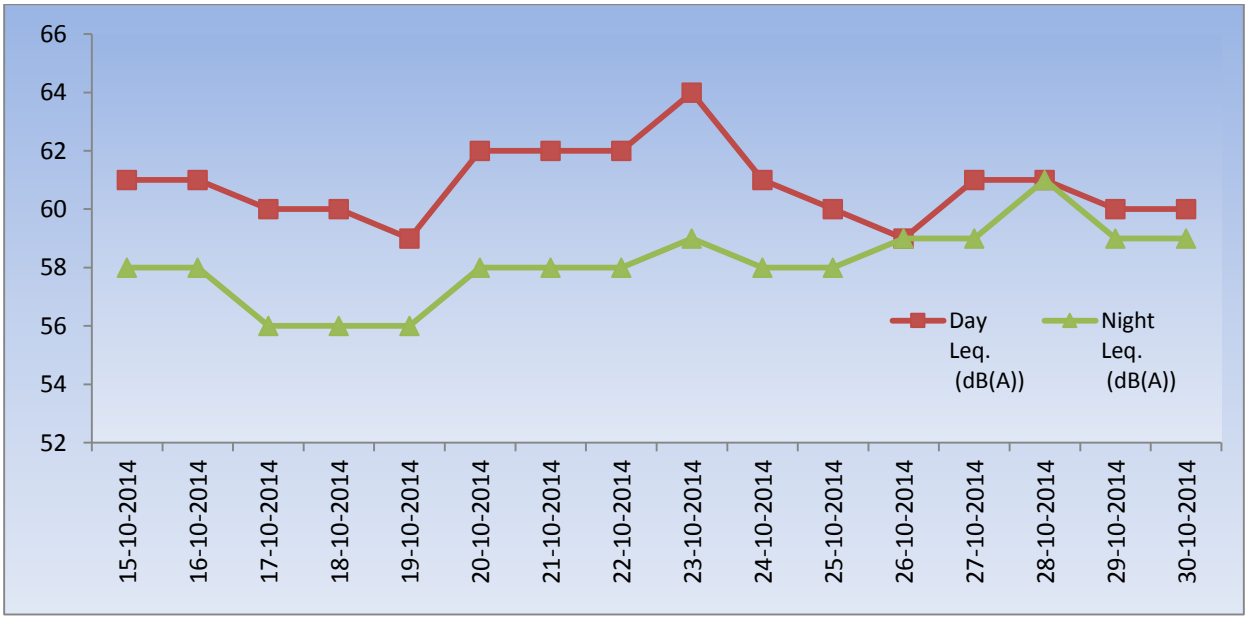

Figure 52: Ambient Noise level trend of Marathali

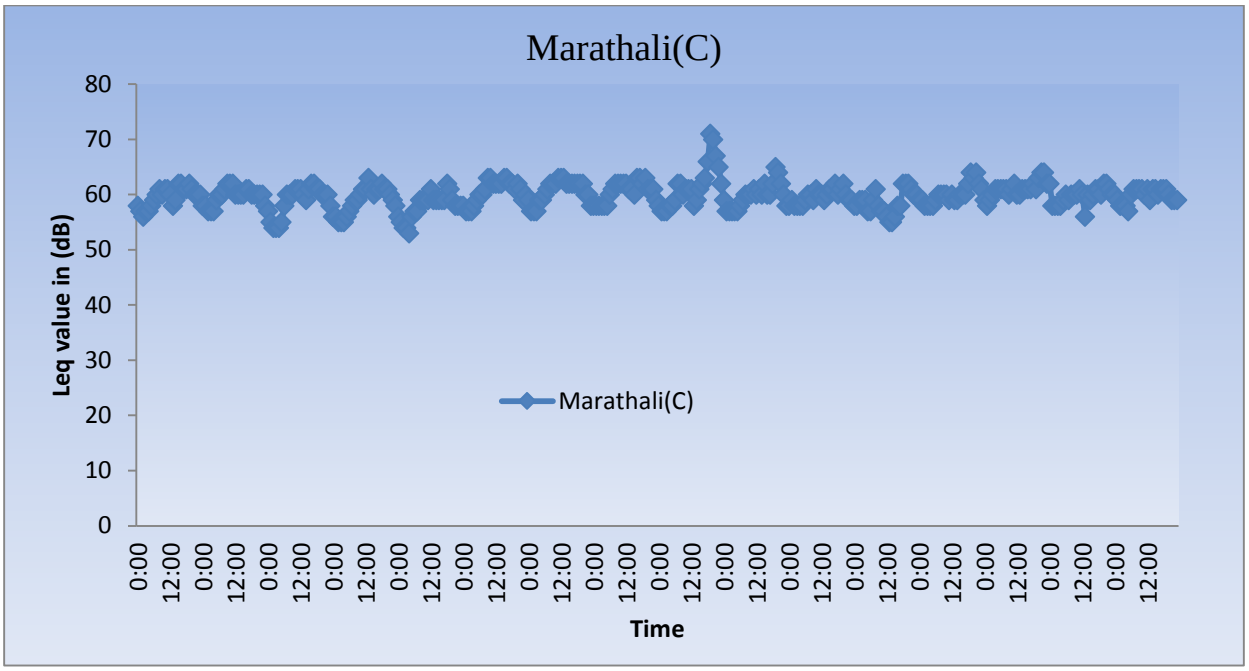

Figure 53: Ambient Noise level trend of Marathali on hourly basis

6.10.5 NOISE MONITORING STATION AT BTM

The noise monitoring station is installed at BTM and station comes into category of residential zone having prescribed limits of 55 dB(A) for day time and 45 dB(A) for night time. The GPS coordinate **12º54' 30.36'' N** and **77º35' 10.96'' E**. The ambient noise monitoring data for the period 15/10/2014 to 30/10/2014 is placed in table - 31. Figure - 54 show the trend of BTM Station for day-night time. Hourly basis data of BTM is mentioned in table - 5 of Annexure-I and graphical representation is shown in figure - 55.

Table 31: Ambient Noise Level Data of BTM

Date	Day Leq. (dB(A))	Day Min. (dB(A))	Day Max. (dB(A))	Night Leq. (dB(A))	Night Min. (dB(A))	Night Max. (dB(A))	Limit Day dB(A) 6AM to 10PM	Limit Day dB(AA) 10PM to 6AM
15-10-2014	67	62	71	59	52	66	55	45
16-10-2014	67	61	70	58	51	65	55	45
17-10-2014	67	61	71	59	52	65	55	45
18-10-2014	67	59	70	57	49	64	55	45
19-10-2014	65	**58**	69	56	49	63	55	45
20-10-2014	67	61	69	57	**47**	66	55	45
21-10-2014	67	62	70	58	52	66	55	45
22-10-2014	67	61	72	59	52	69	55	45

23-10-2014	69	61	**76**	60	50	**73**	55	45
24-10-2014	67	60	74	58	52	65	55	45
25-10-2014	67	60	74	57	51	62	55	45
26-10-2014	65	59	68	56	49	67	55	45
27-10-2014	67	60	70	59	49	69	55	45
28-10-2014	67	59	72	58	52	65	55	45
29-10-2014	66	61	69	59	51	65	55	45
30-10-2014	66	61	69	58	50	65	55	45

Close examination to above data reveals following observations:

- Sound level data at BTM always exceed the prescribed limit of day and night time.
- Sound level data ranges from 58 dB(A) (19/10/2014) to 76 dB(A) (23/10/2014) for day time and during night time sound level data varies from 47 dB(A) (20/10/2014) to 73 dB(A) (23/10/2014).
- Hourly basis data shows that the maximum sound level of 74 dB(A) at 08.00 P.M during 23/10/2014 whereas minimum sound level of 48 dB(A) was observed at 03.00 AM during 20/10/2014.

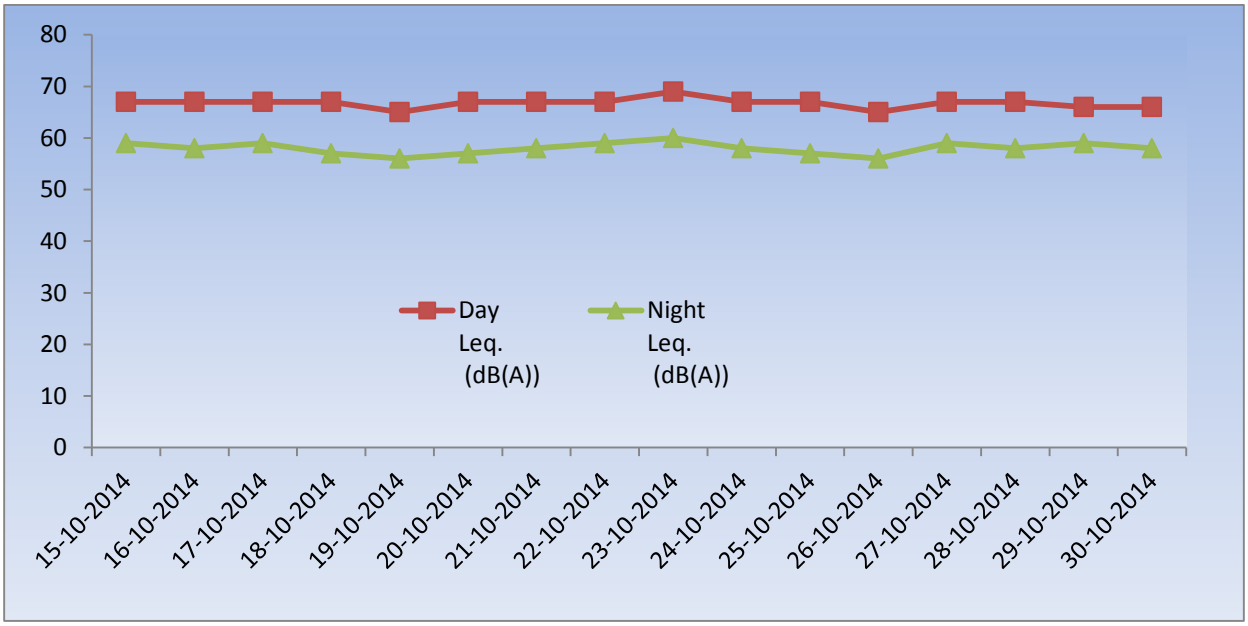

Figure 54: Ambient Noise level trend of BTM

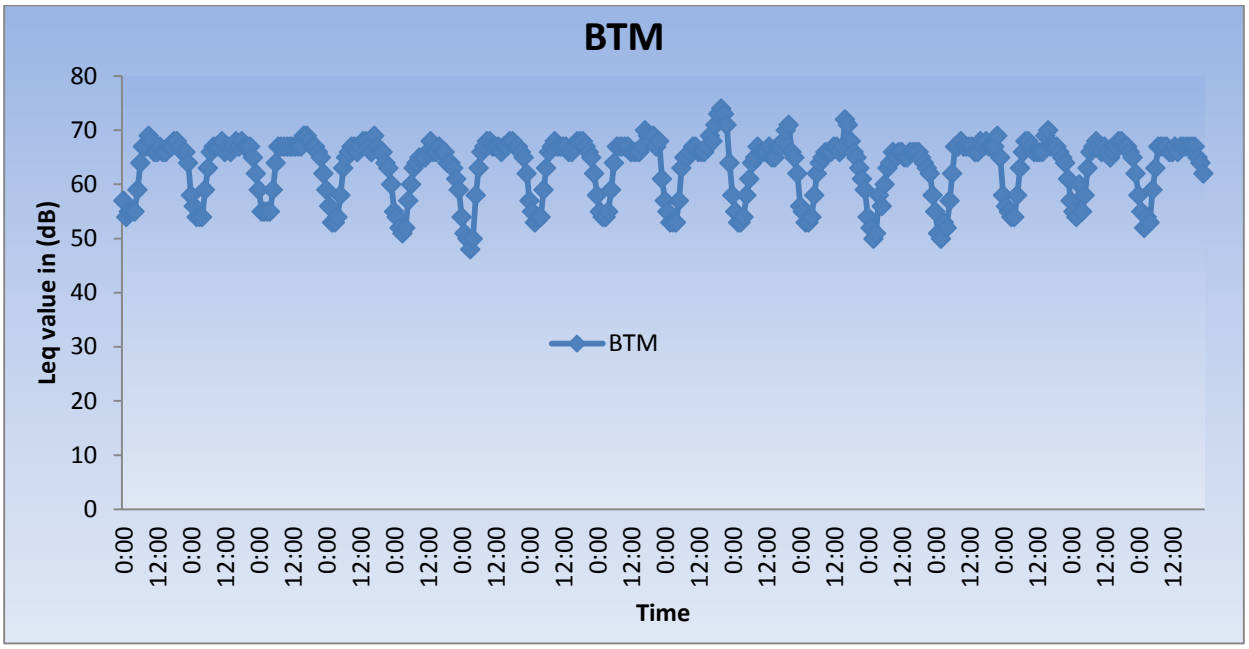

Figure 55: Ambient Noise level trend of BTM on hourly basis

6.11 CHENNAI

Chennai, the capital city of Tamil Nadu, is located at 13.0827° N, 80.2707° E, and lies in the Southern India on the Coromandel Coast off the Bay of Bengal. It is the biggest industrial and commercial centre in South India, and a major cultural, economic and educational centre. Chennai is known as the "Detroit of India" for its automobile industry. Chennai is spread over an area of 426 sq. Kilometers. Current Population of Chennai in 2014 is **4,792,949** as per census - 2011**.** In Chennai, five monitoring stations are installed and details are depicted in table - 32 and figure - 56.

Table 32: Monitoring locations of Chennai

Sl. No.	Station location	Category	Latitude	Longitude
1.	Eye Hospital	Silence	13º6' 16.13" N	80º17' 3.35" E
2.	T. Nagar	Commercial	13º2' 24.34" N	80º13' 57.44" E
3.	Perambur	Commercial	13º6' 43.46" N	80º14' 16.85" E
4.	Guindy	Industrial	13º0' 42.79" N	80º13' 9.46" E
5.	Triplicane	Residential	13º3' 17.91" N	80º16' 28.44" E

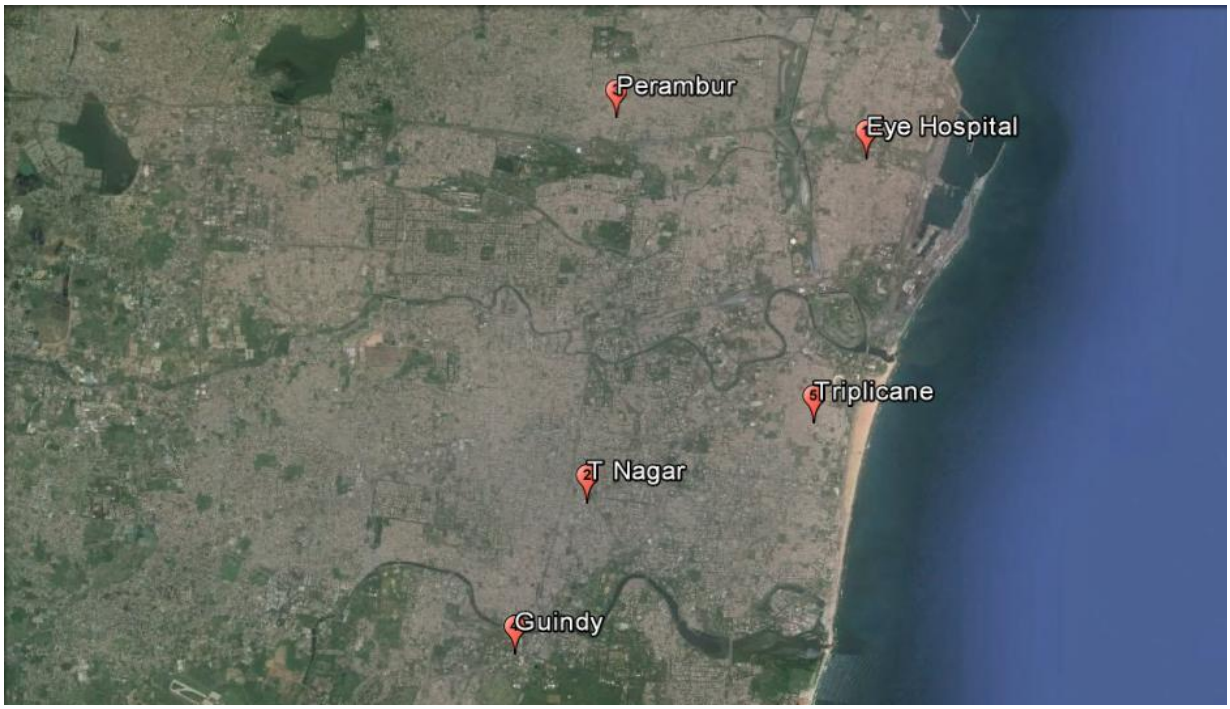

Figure 56: Map shows the monitoring locations of Chennai

6.12 AMBIENT NOISE MONITORING DATA OF CHENNAI'S STATION

6.12.1 NOISE MONITORING STATION AT EYE HOSPITAL

The station is installed at Eye Hospital and fall under the category of Silence Zone. The GPS coordinate of said site is **13º6' 16.13'' N** and **80º17' 3.35'' E.** The ambient noise monitoring data of Eye Hospital for the period 15/10/2014 to 30/10/2014 is placed in table - 33. Figure - 57 depicts the trend of Eye Hospital Station for day-night time. Hourly basis data of Eye Hospital is placed in table - 6 of Annexure-I and graphical representation is shown in figure - 58.

Table 33: Ambient Noise Level Data of Eye Hospital

Date	Day Leq. (dB(A))	Day Min. (dB(A))	Day Max. (dB(A))	Night Leq. (dB(A))	Night Min. (dB(A))	Night Max. (dB(A))	Limit Day dB(A) 6AM to 10PM	Limit Day dB(AA) 10PM to 6AM
15-10-2014	62	21	78	58	49	64	50	40
16-10-2014	60	**20**	75	58	46	68	50	40
17-10-2014	69	23	80	59	48	71	50	40
18-10-2014	70	62	79	72	46	**88**	50	40

19-10-2014	69	61	83	61	52	78	50	40
20-10-2014	70	64	85	64	48	70	50	40
21-10-2014	72	62	81	64	49	83	50	40
22-10-2014	81	65	**94**	65	49	82	50	40
23-10-2014	73	62	91	60	**44**	73	50	40
24-10-2014	72	60	86	66	47	87	50	40
25-10-2014	68	63	78	59	45	68	50	40
26-10-2014	72	61	91	55	**44**	64	50	40
27-10-2014	68	61	73	55	48	63	50	40
28-10-2014	66	55	74	58	46	76	50	40
29-10-2014	67	58	84	57	47	65	50	40
30-10-2014	68	60	86	57	46	69	50	40

Close examination to above table reveals following observations:

- Sound level data at Eye Hospital always exceed the prescribed limit of 50 dB(A) (day time) and 40 dB(A) (night time).
- During day time, sound level data varies from 20 dB(A) (16/10/2014) to 94 dB(A) (22/10/2014) and during night time sound level data ranges from 44 dB(A) (23-26/10/2014) to 88 dB(A) (18/10/2014).
- Hourly basis data revels the maximum sound level of 91 dB(A) at 7.00 PM during 22/10/2014 day whereas minimum sound level of 32 dB(A) was observed at 12.00 – 02.00 PM during 15/10/2014.

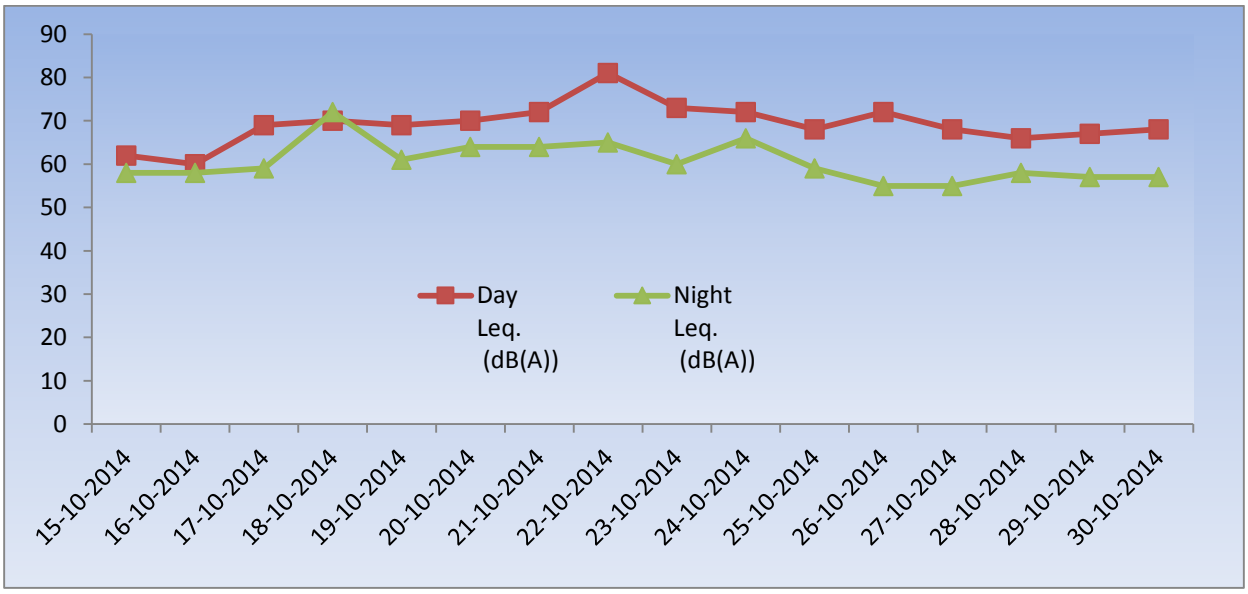

Figure 57: Ambient Noise level trend of Eye Hospital

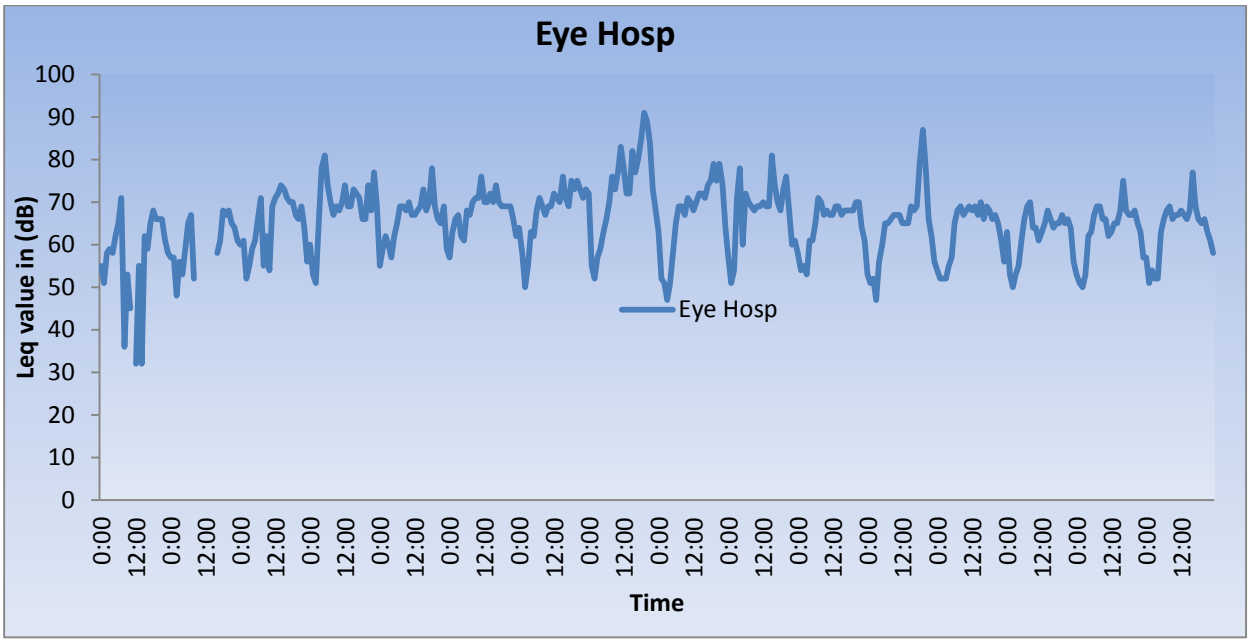

Figure 58: Ambient Noise level trend of Eye Hospital on hourly basis

6.12.2 NOISE MONITORING STATION AT T. NAGAR

The noise monitoring station is installed at T.Nagar. The station fall under the category of commercial zone with GPS coordinate **13º2' 24.34'' N** and **80º13' 57.44'' E**. The ambient noise monitoring data for the period 15/10/2014 to 30/10/2014 is placed in table - 34. Figure - 59 depicts the trend of T.Nagar Station for day-night time. Hourly basis data of T.Nagar is placed in table - 6 of Annexure-I and graphical representation is shown in figure - 60.

Table 34: Ambient Noise Level Data of T.Nagar

Date	Day Leq. (dB(A))	Day Min. (dB(A))	Day Max. (dB(A))	Night Leq. (dB(A))	Night Min. (dB(A))	Night Max. (dB(A))	Limit Day dB(A) 6AM to 10PM	Limit Day dB(AA) 10PM to 6AM
15-10-2014	76	70	80	65	58	73	65	55
16-10-2014	76	68	78	65	58	73	65	55
17-10-2014	77	69	82	66	58	72	65	55
18-10-2014	76	71	80	69	58	**87**	65	55
19-10-2014	75	**66**	80	65	59	72	65	55
20-10-2014	79	68	82	66	58	75	65	55
21-10-2014	77	69	81	67	59	76	65	55
22-10-2014	76	69	**87**	67	57	87	65	55

23-10-2014	75	67	82	67	57	75	65	55
24-10-2014	75	71	81	71	59	77	65	55
25-10-2014	75	67	78	64	57	73	65	55
26-10-2014	73	67	79	63	56	71	65	55
27-10-2014	75	69	78	64	**55**	72	65	55
28-10-2014	75	69	80	65	58	73	65	55
29-10-2014	75	69	78	65	57	72	65	55
30-10-2014	75	70	78	65	58	72	65	55

Close examination to above table reveals following observations:

- Sound level data of T.Nagar always exceed the prescribed limit of 65 dB(A) (day time) and of 55dB(A) (night time).
- During day time, sound level data varies from 66 dB(A) (19/10/2014) to 87 dB(A) (22/10/2014) and during night time sound level data ranges from 55 dB(A) (27/10/2014) to 87 dB(A) (18/10/2014).
- Hourly basis data revels the maximum sound level of 82dB(A) at 08.00 PM, during 22/10/2014 whereas minimum sound level of 58 dB(A) was observed at various occasions.

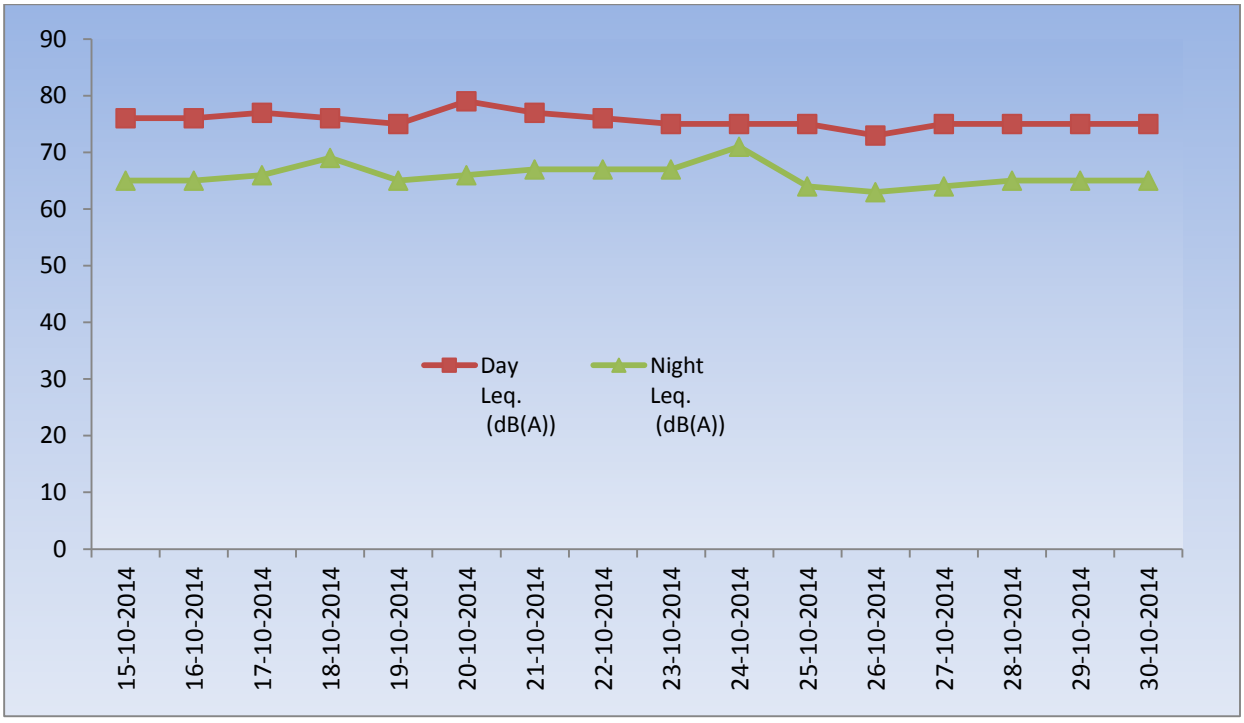

Figure 59: Ambient Noise level trend of T.Nagar

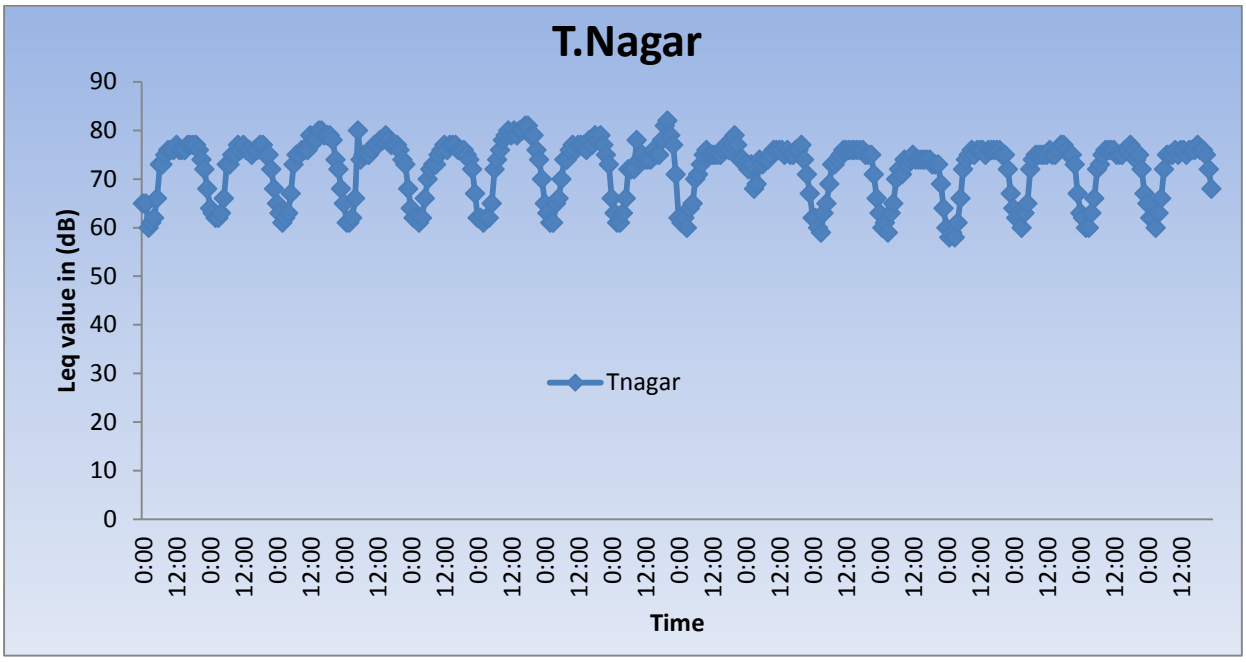

Figure 60: Ambient Noise level trend of T.Nagar on hourly basis

6.12.3 NOISE MONITORING STATION AT PERAMBUR

The noise monitoring station is installed in Perambur. The station fall under the category of commercial zone having GPS coordinate **13°6' 43.46'' N** and **80°14' 16.85'' E**. The ambient noise monitoring data for the period 15/10/2014 to 30/10/2014 is placed in table - 35. Figure - 61show the trend of Perambur Station for day-night time. Hourly basis data of Perambur is mentioned in table - 6 of Annexure-I and graphical representation is shown in figure - 62.

Table 35: Ambient Noise Level Data of Perambur

Date	Day Leq. (dB(A))	Day Min. (dB(A))	Day Max. (dB(A))	Night Leq. (dB(A))	Night Min. (dB(A))	Night Max. (dB(A))	Limit Day dB(A) 6AM to 10PM	Limit Day dB(AA) 10PM to 6AM
15-10-2014	71	66	74	61	52	70	65	55
16-10-2014	71	66	74	61	51	69	65	55
17-10-2014	73	68	**96**	61	50	69	65	55
18-10-2014	72	69	78	62	**48**	71	65	55
19-10-2014	72	67	86	62	51	70	65	55
20-10-2014	72	66	75	64	50	71	65	55
21-10-2014	73	67	75	63	51	74	65	55
22-10-2014	78	69	89	63	54	74	65	55

23-10-2014	74	66	83	62	52	72	65	55
24-10-2014	72	**65**	78	64	50	**75**	65	55
25-10-2014	72	**65**	74	61	52	71	65	55
26-10-2014	72	66	81	61	50	70	65	55
27-10-2014	72	66	76	60	**48**	71	65	55
28-10-2014	71	66	73	61	**48**	71	65	55
29-10-2014	71	66	74	62	56	70	65	55
30-10-2014	71	67	74	62	53	72	65	55

Close examination to above data reveals following observations:

- At Preambur, Sound level data always exceed the prescribed limit of 65 dB(A) (day time) and 55 dB(A) (night time).
- Sound level data varies from 65 dB(A) (24-25/10/2014) to 96 dB(A) (17/10/2014) for day time and during night time sound level data ranges from 48 dB(A) (18, 27-28/10/2014) to 75 dB(A) (24/10/2014).
- Hourly basis data revels the maximum sound level of 86 dB(A) at 07.00 PM during 22/10/2014 whereas minimum sound level of 51 dB(A) was observed at various occasion.

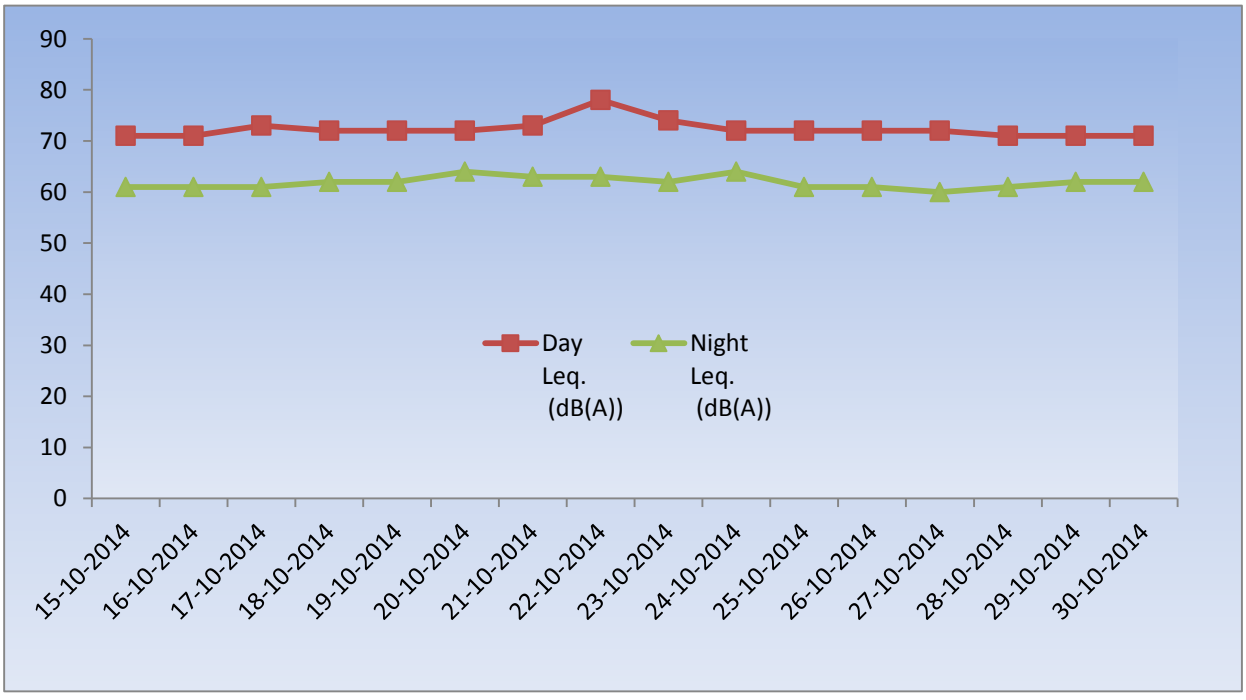

Figure 61: Ambient Noise level trend of Preambur

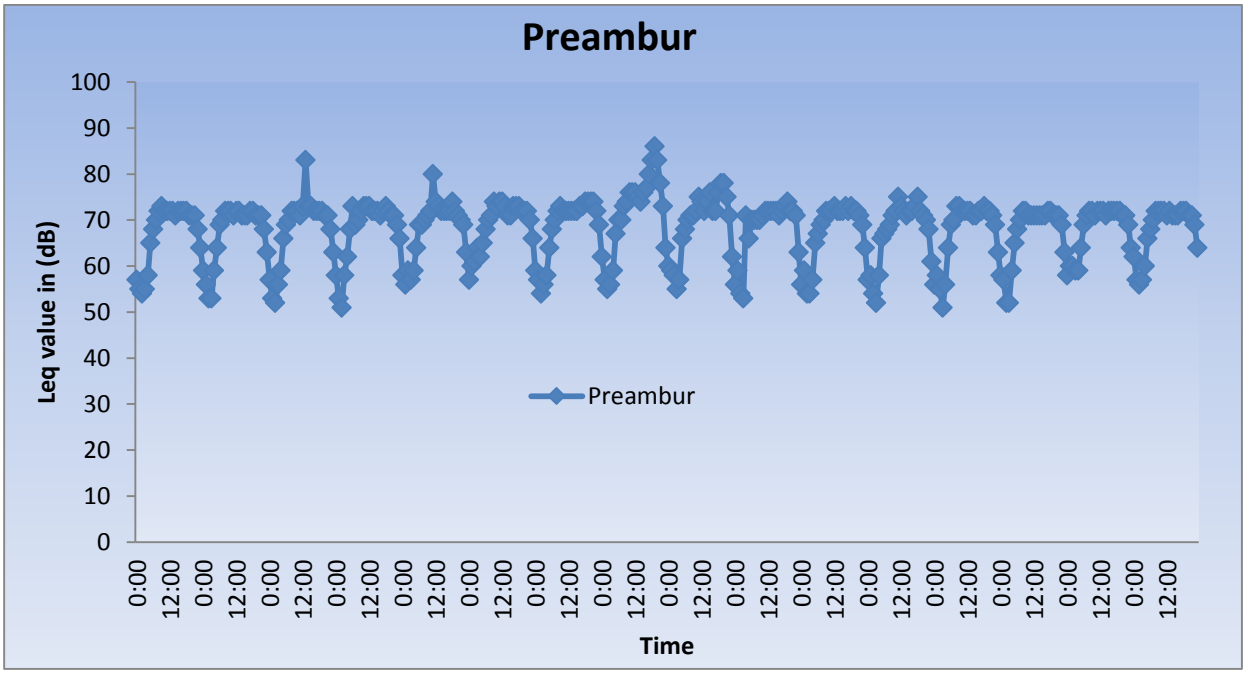

Figure 62: Ambient Noise level trend of Preambur on hourly basis

6.12.4 NOISE MONITORING STATION AT GUINDY

The noise monitoring station is installed at Guindy. The station fall under the category of Industrial zone having prescribed limits of 75 dB(A) for day time and 70 dB(A) for night time. The GPS coordinate **13°0' 42.79'' N** and **80°13' 9.46'' E**. The ambient noise monitoring data for the period 15/10/2014 to 30/10/2014 is placed in table - 36. Figure - 63 show the trend of Guindy Station for day-night time. Hourly basis data of Guindy is mentioned in table - 6 of Annexure-I and graphical representation is shown in figure - 64.

Table 36: Ambient Noise Level Data of Guindy

Date	Day Leq. (dB(A))	Day Min. (dB(A))	Day Max. (dB(A))	Night Leq. (dB(A))	Night Min. (dB(A))	Night Max. (dB(A))	Limit Day dB(A) 6AM to 10PM	Limit Day dB(AA) 10PM to 6AM
15-10-2014	80	78	82	76	72	79	75	70
16-10-2014	80	78	82	75	71	80	75	70
17-10-2014	81	78	84	76	72	81	75	70
18-10-2014	80	**73**	85	77	71	**91**	75	70
19-10-2014	83	**73**	100				75	70
20-10-2014	86	**73**	101				75	70

21-10-2014	80	**73**	90	77	76	79	75	70
22-10-2014	77	75	80	73	69	76	75	70
23-10-2014	79	75	82	72	**66**	77	75	70
24-10-2014	82	77	**104**	75	69	87	75	70
25-10-2014	80	**73**	91	74	70	78	75	70
26-10-2014	79	76	82	74	70	77	75	70
27-10-2014	80	77	82	74	69	78	75	70
28-10-2014	79	77	81	75	71	79	75	70
29-10-2014	80	77	81	75	72	79	75	70
30-10-2014	80	78	83	75	70	79	75	70

Close examination to above data reveals following observations:

- Sound level data at Guindy always exceed the prescribed limit of day and night time.
- Sound level data varies from 73 dB(A) (18, 19, 20, 21-25/10/2014) to 104 dB(A) (24/10/2014) for day time and during night time sound level data ranges from 66 dB(A) (23/10/2014) to 91 dB(A) (18/10/2014).
- Hourly basis data revels the maximum sound level of 100 dB(A) at 05.00 P.M during 19/10/2014 whereas minimum sound level of 67 dB(A) was observed at 02.00 A.M during 23/10/2014.

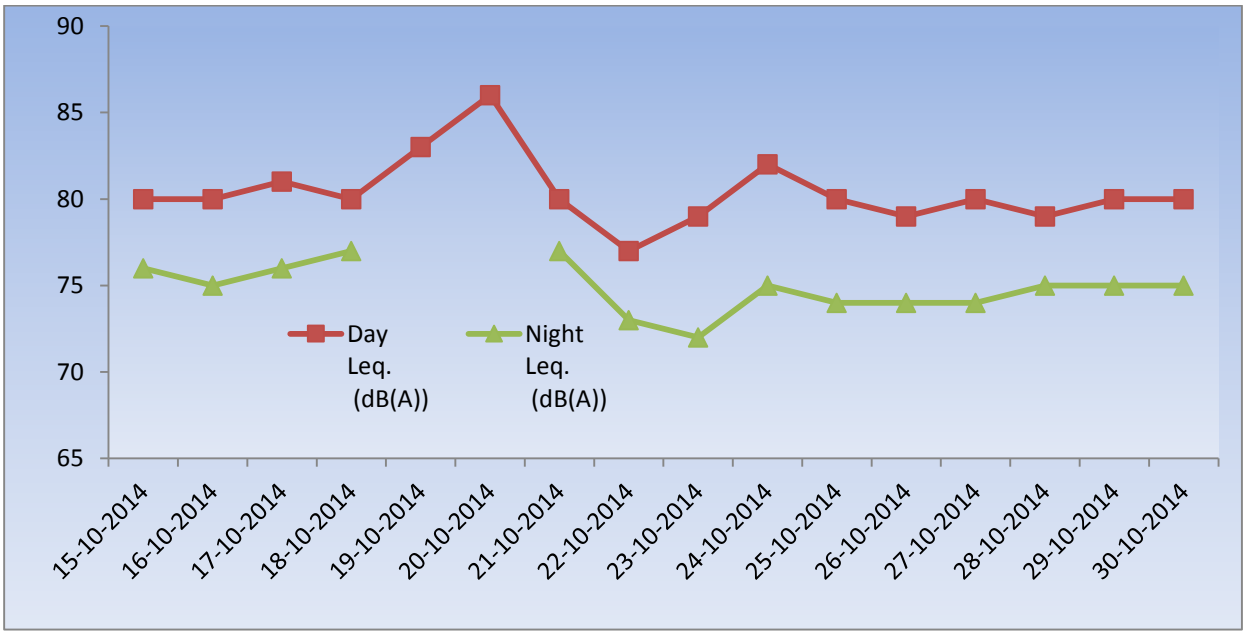

Figure 63: Ambient Noise level trend of Guindy

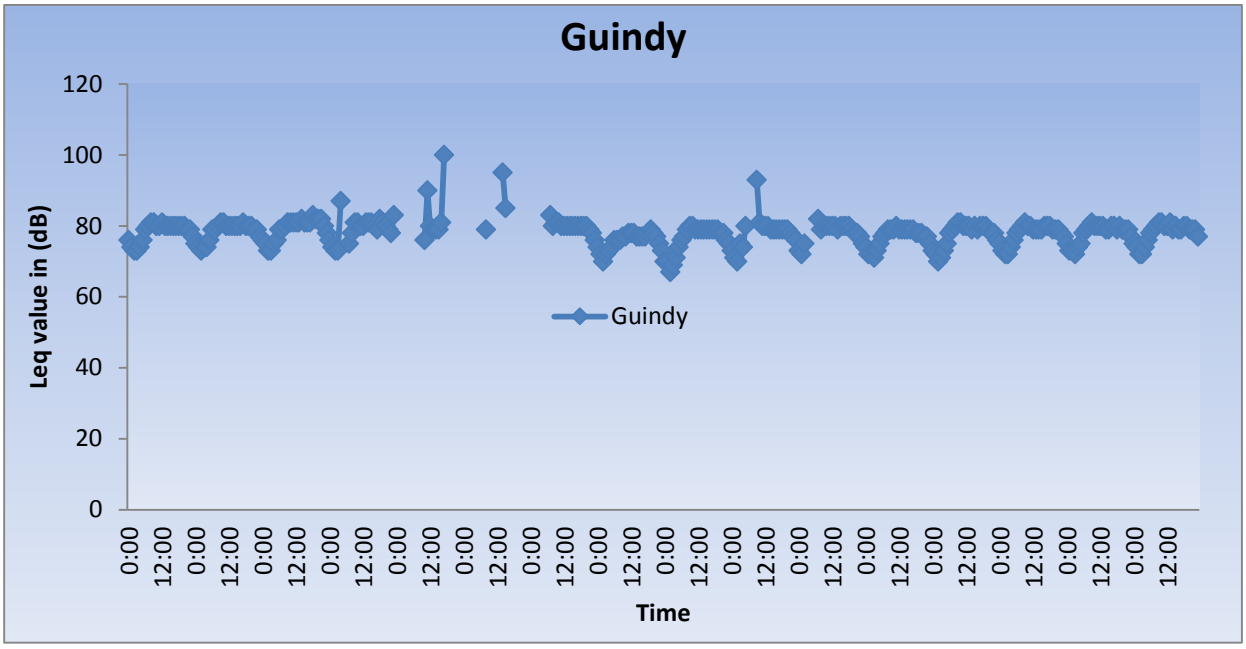

Figure 64: Ambient Noise level trend of Guindy on hourly basis

6.12.5 NOISE MONITORING STATION AT TRIPLICANE

The noise monitoring station is installed at Triplicane and station comes into category of residential zone having prescribed limits of 55 dB(A) for day time and 45 dB(A) for night time. The GPS coordinate **13°3' 17.91'' N** and **80°16' 28.44'' E**. The ambient noise monitoring data for the period 15/10/2014 to 30/10/2014 is placed in table - 37. Figure - 65 show the trend of Triplicane Station for day-night time. Hourly basis data of Triplicane is mentioned in table - 6 of Annexure-I and graphical representation is shown in figure - 66.

Table 37: Ambient Noise Level Data of Triplicane

Date	Day Leq. (dB(A))	Day Min. (dB(A))	Day Max. (dB(A))	Night Leq. (dB(A))	Night Min. (dB(A))	Night Max. (dB(A))	Limit Day dB(A) 6AM to 10PM	Limit Day dB(AA) 10PM to 6AM
15-10-2014	71	67	73	60	50	68	55	45
16-10-2014	71	68	73	60	49	69	55	45
17-10-2014	71	66	78	61	52	68	55	45
18-10-2014	64	40	**90**	58	35	**75**	55	45
19-10-2014	48	**39**	52	39	**33**	53	55	45
20-10-2014	61	47	68	49	37	62	55	45
21-10-2014	69	60	74	59	45	73	55	45

22-10-2014	78	69	87	62	50	74	55	45
23-10-2014	71	64	77	59	45	74	55	45
24-10-2014	70	66	72	61	49	**75**	55	45
25-10-2014	69	65	72	57	47	66	55	45
26-10-2014	69	65	72	57	47	66	55	45
27-10-2014	70	65	77	57	45	69	55	45
28-10-2014	71	66	75	59	49	69	55	45
29-10-2014	71	66	76	61	48	71	55	45
30-10-2014	71	66	75	61	53	69	55	45

Close examination to above data reveals following observations:

- Out of 16 days observations, 15 times sound level data exceed the prescribed limit of 55 dB(A) (day time) whereas sound level 15 times above the prescribe limits of 45 dB(A) (night time).
- Sound level data ranges from 39 dB(A) (19/10/2014) to 90 dB(A) (18/10/2014) for day time and during night time sound level data varies from 33 dB(A) (19/10/2014) to 75 dB(A) (24/10/2014).
- Hourly basis data shows that the maximum sound level of 85 dB(A) at 07.00 P.M during 22/10/2014 whereas minimum sound level of 34 dB(A) was observed at 01.00 – 03.00 AM during 19/10/2014.

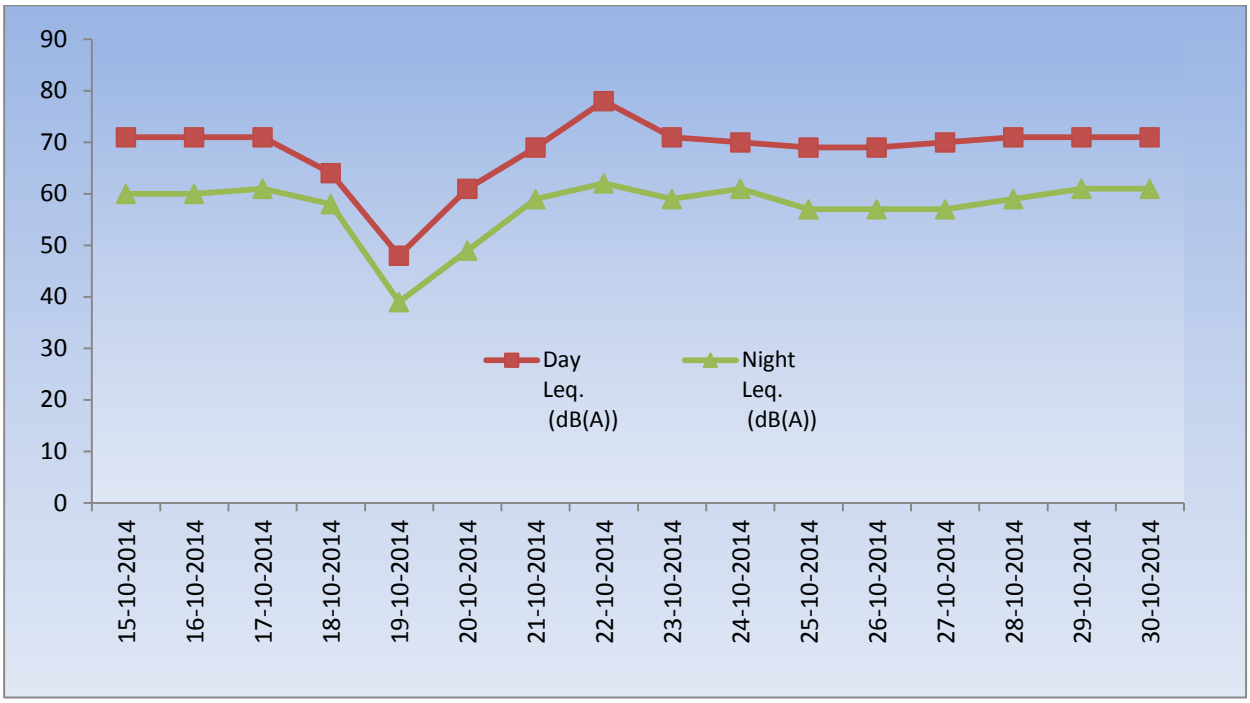

Figure 65: Ambient Noise level trend of Triplicane

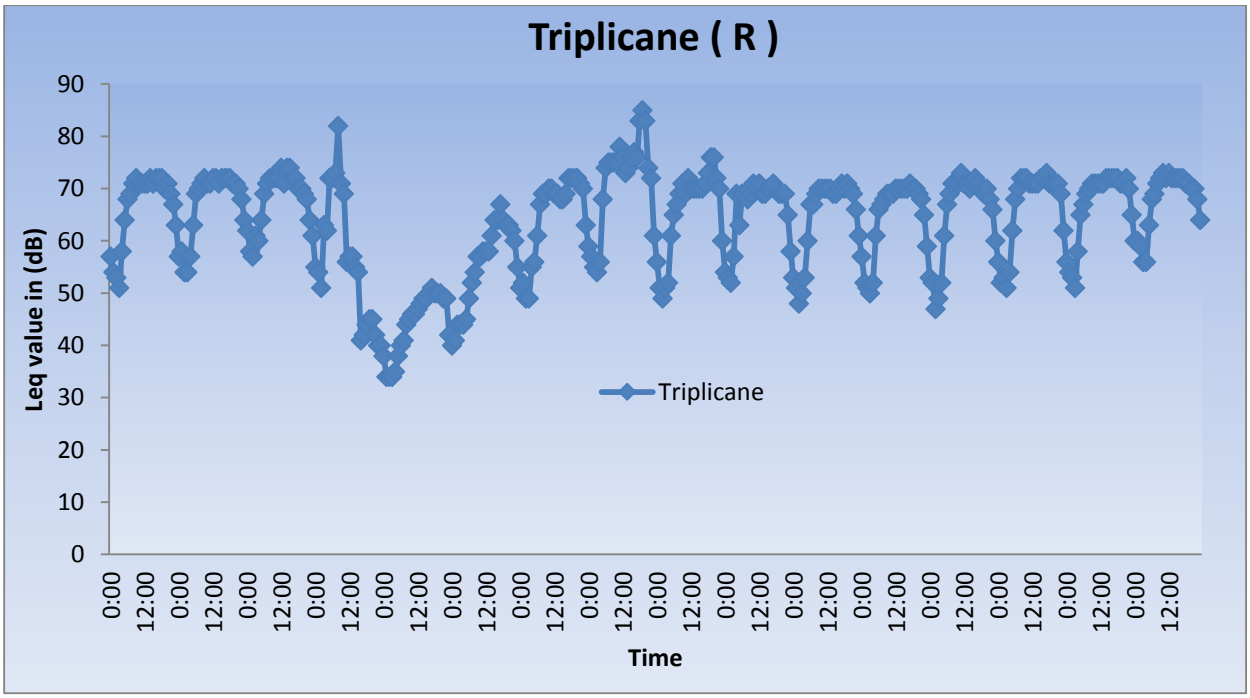

Figure 66: Ambient Noise level trend of Triplicane on hourly basis

6.13 KOLKATA

Kolkata, the capital of Indian state of West Bengal, is located at 22.5667° N, 88.3667° E, and lies on East bank of the Hooghly river bounded by Bangladesh and Bay of Bengal. Kolkata spread over an area of 1480 square kilometers. Current Population of Kolkata in

2014 is **4,486,679** as per census-2011**.** In Kolkata, five monitoring stations are installed and details are depicted in table - 38 and figure - 67.

Table 38: Monitoring locations of Kolkata

Sl. No.	Station location	Category	Latitude	Longitude
1.	SSKM Hospital	Silence	22º32' 19.58" N	88º20' 35.29" E
2.	Gole Park	Industrial	22º31' 1.2" N	88º24' 15.8" E
3.	Kolkata HQ	Commercial	22º33' 42.67" N	88º24' 32.46" E
4.	Patauli	Residential	22º28' 21.07" N	88º23' 29.71" E
5.	New Market	Commercial	22º33' 41.4" N	88º21' 10.4" E

Figure 67: Map shows the monitoring locations of Kolkata

6.14 AMBIENT NOISE MONITORING DATA OF KOLKATA'S STATION

6.14.1 NOISE MONITORING STATION AT SSKM HOSPITAL

The station is installed at SSKM Hospital and fall under the category of Silence Zone. The GPS coordinate of said site is **22º32' 19.58'' N** and **88º20' 35.29'' E.** The ambient noise monitoring data of SSKM Hospital for the period 15/10/2014 to 30/10/2014 is

placed in table - 39. Figure - 68 depicts the trend of SSKM Hospital Station for day-night time. Hourly basis data of SSKM Hospital is placed in table - 7 of Annexure-I and graphical representation is shown in figure - 69.

Table 39: Ambient Noise Level Data of SSKM Hospital

Date	Day Leq. (dB(A))	Day Min. (dB(A))	Day Max. (dB(A))	Night Leq. (dB(A))	Night Min. (dB(A))	Night Max. (dB(A))	Limit Day dB(A) 6AM to 10PM	Limit Day dB(AA) 10PM to 6AM
15-10-2014	63	57	68	55	51	59	50	40
16-10-2014	62	56	66	56	51	64	50	40
17-10-2014	62	57	65	56	53	59	50	40
18-10-2014	61	56	67	56	53	59	50	40
19-10-2014	60	56	67	55	53	59	50	40
20-10-2014	62	56	68	55	51	62	50	40
21-10-2014	63	57	70	56	52	61	50	40
22-10-2014	62	57	67	57	52	69	50	40
23-10-2014	61	57	67	62	52	**74**	50	40
24-10-2014	62	57	**75**	61	54	73	50	40
25-10-2014	60	57	68	57	53	64	50	40
26-10-2014	61	56	70	56	52	62	50	40
27-10-2014	62	56	69	57	52	66	50	40
28-10-2014	62	**55**	66	55	52	59	50	40
29-10-2014	63	**55**	74	56	**50**	66	50	40
30-10-2014	62	56	68	58	53	68	50	40

Close examination to above table reveals following observations:

- Sound level data always exceed the prescribed limit of 50 dB(A) (day time) and 40 dB(A) (night time).
- During day time, sound level data varies from 55 dB(A) (28-29/10/2014) to 75 dB(A) (24/10/2014) and during night time sound level data ranges from 50 dB(A) (29/10/2014) to 74 dB(A) (23/10/2014).
- Hourly basis data revels the maximum sound level of 71 dB(A) at 11.00 PM during 23/10/2014 whereas minimum sound level of 52 dB(A) was observed at various occasions.

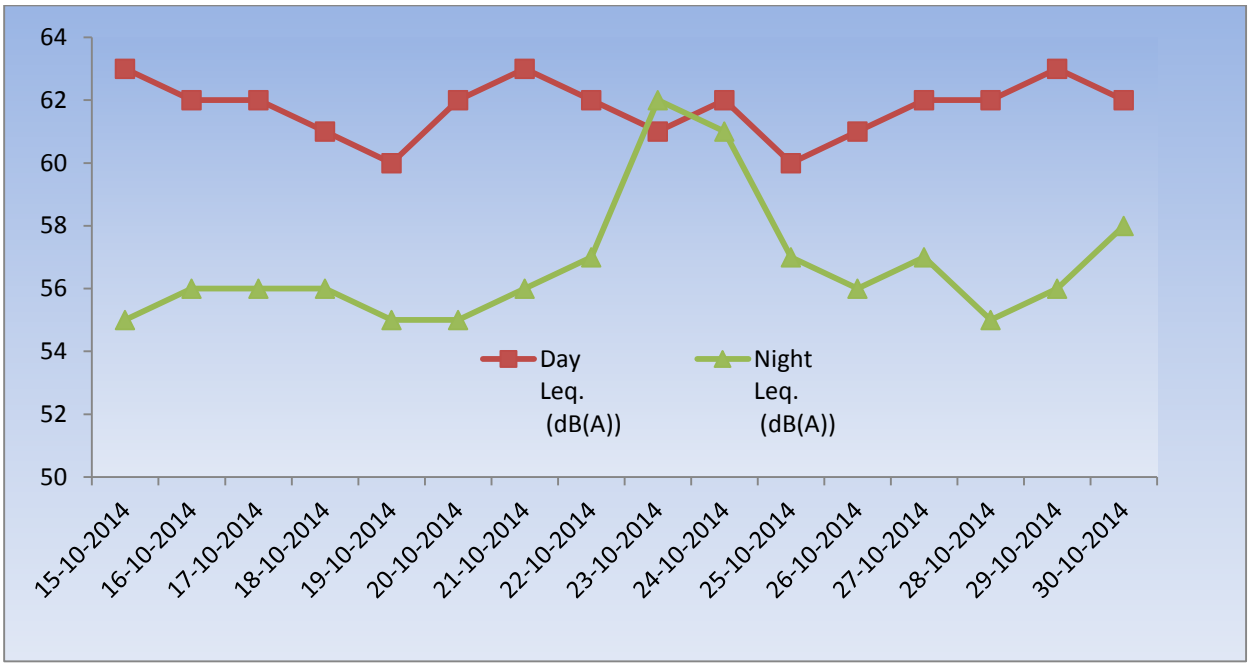

Figure 68: Ambient Noise level trend of SSKM Hospital

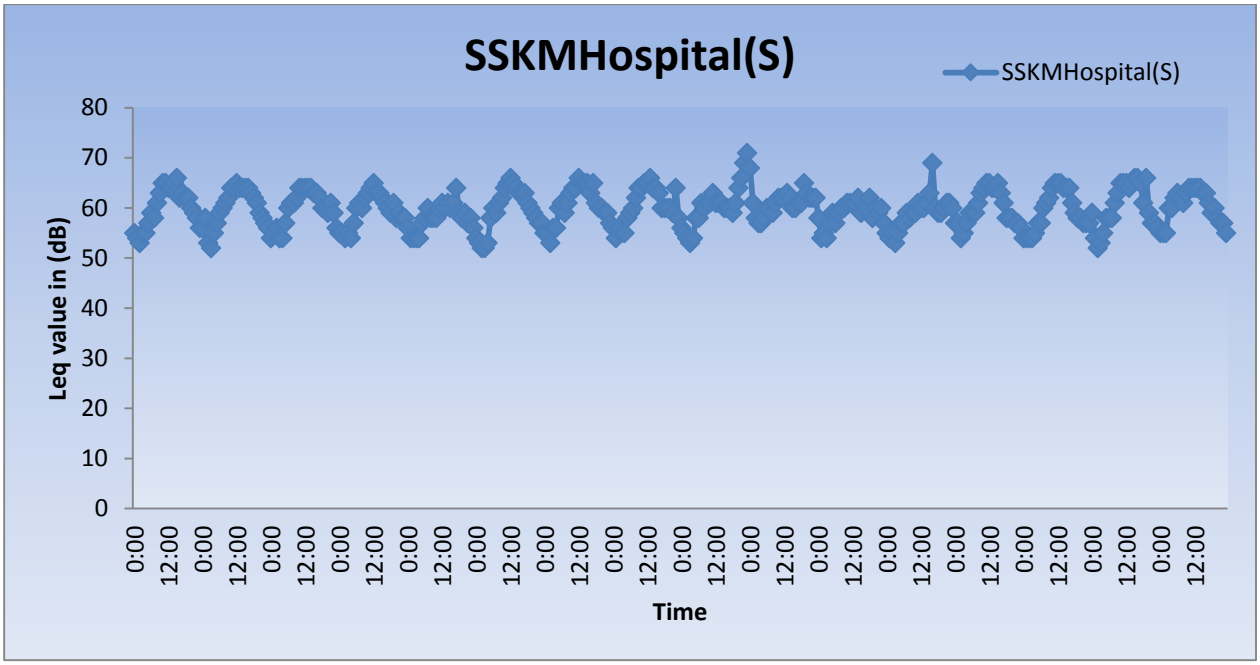

Figure 69: Ambient Noise level trend of SSKM Hospital on hourly basis

6.14.2 NOISE MONITORING STATION AT GOLE PARK

The noise monitoring station is installed Gole Park. The station fall under the category of Industrial zone with GPS coordinate **22°31' 1.2'' N** and **88°24' 15.8'' E**. The ambient noise monitoring data for the period 15/10/2014 to 30/10/2014 is placed in table - 40. Figure - 70 depicts the trend of Gole Park Station for day-night time. Hourly basis data of

Gole Park is placed in table - 7 of Annexure-I and graphical representation is shown in figure - 71.

Table 40: Ambient Noise Level Data of Gole Park

Date	Day Leq. (dB(A))	Day Min. (dB(A))	Day Max. (dB(A))	Night Leq. (dB(A))	Night Min. (dB(A))	Night Max. (dB(A))	Limit Day dB(A) 6AM to 10PM	Limit Day dB(AA) 10PM to 6AM
15-10-2014	80	67	**107**	70	64	72	75	70
16-10-2014	73	67	80	71	65	75	75	70
17-10-2014	73	67	77	72	69	80	75	70
18-10-2014	73	66	77	71	64	80	75	70
19-10-2014	72	68	76	71	69	73	75	70
20-10-2014	73	**66**	84	70	65	78	75	70
21-10-2014	73	**66**	78	70	64	75	75	70
22-10-2014	73	69	75	71	67	73	75	70
23-10-2014	74	69	87	77	**63**	89	75	70
24-10-2014	76	68	93	74	64	**94**	75	70
25-10-2014	74	67	84	71	64	73	75	70
26-10-2014	74	69	84	72	69	79	75	70
27-10-2014	74	70	78	72	65	74	75	70
28-10-2014	77	68	85	76	69	88	75	70
29-10-2014	73	68	80	74	65	88	75	70
30-10-2014	74	72	80	71	68	73	75	70

Close examination to above table reveals following observations:

- Sound level data of Gole Park exceed the prescribed limit of 75 dB(A) (day time) for 03 days whereas sound level above the prescribe limits of 70 dB(A) (night time) for 13 observations.
- During day time, sound level data varies from 66 dB(A) (20-21/10/2014) to 107 dB(A) (15/10/2014) and during night time sound level data ranges from 63 dB(A) (23/10/2014) to 94 dB(A) (24/10/2014).

- Hourly basis data revels the maximum sound level of 100 dB(A) at 11.00 AM during 15/10/2014 whereas minimum sound level of 66 dB(A) was observed at 3.00 AM during 21/10/2014.

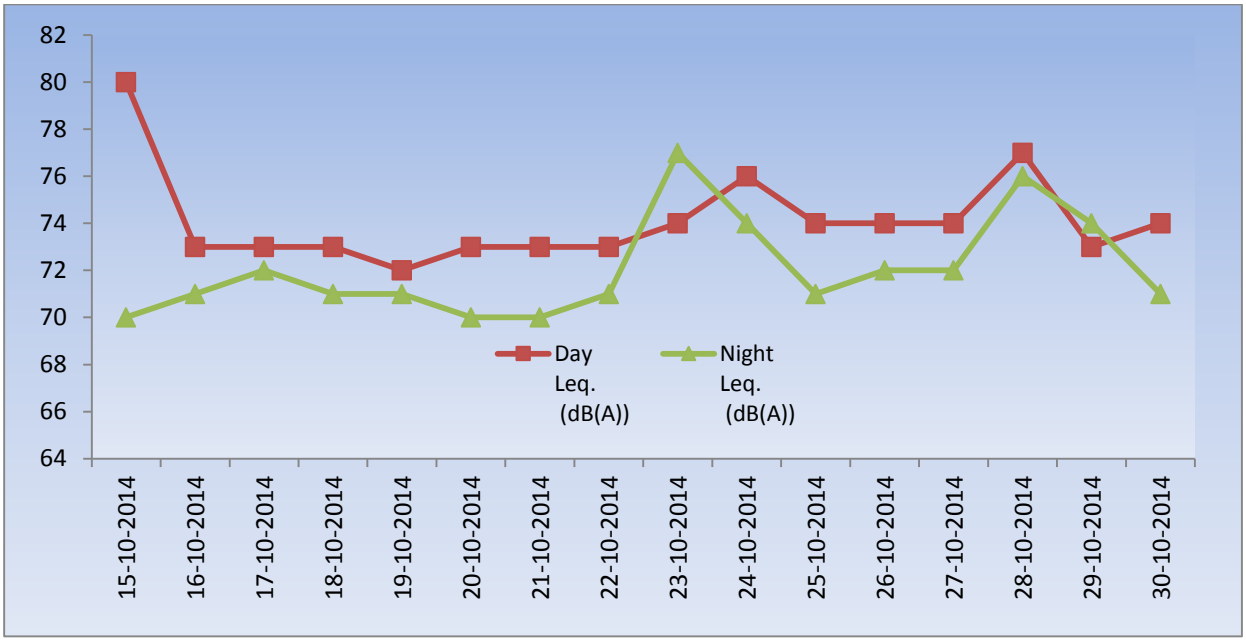

Figure 70: Ambient Noise level trend of Gole Park

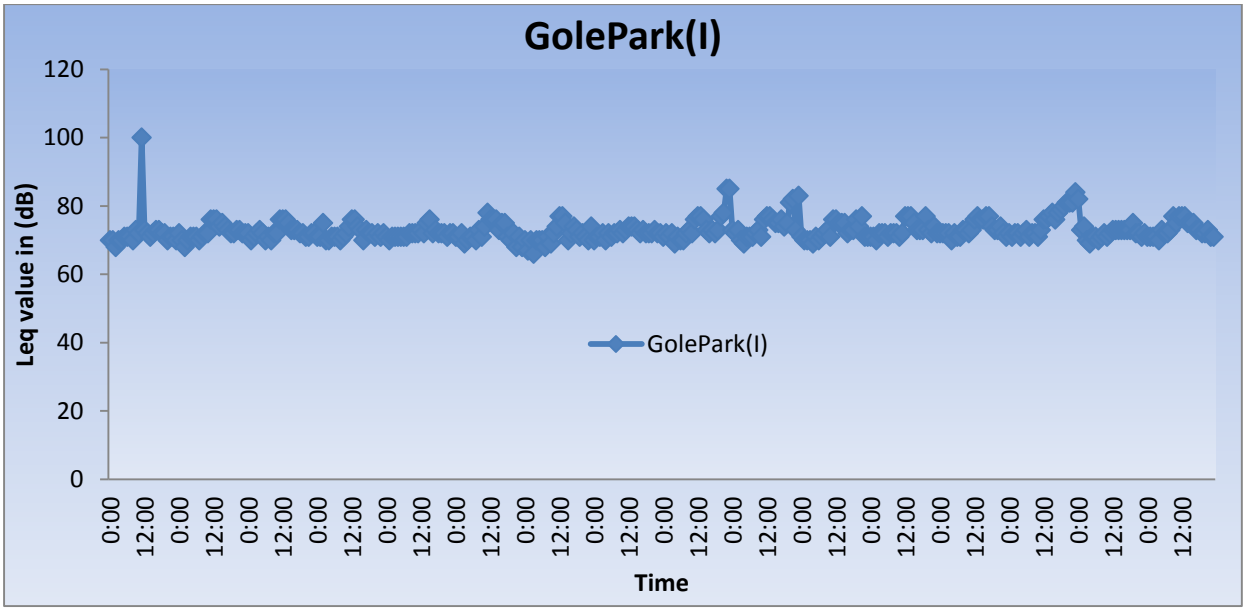

Figure 71: Ambient Noise level trend of Gole Park on hourly basis

6.14.3 NOISE MONITORING STATION AT KOLKATA HQ

The noise monitoring station is installed in Kolkata Head Quarter. The station fall under the category of commercial zone having GPS coordinate 22°33' 42.67'' N and 88°24'

32.46'' E. The ambient noise monitoring data for the period 15/10/2014 to 30/10/2014 is placed in table - 41. Figure - 72 show the trend of Kolkata HQ Station for day-night time. Hourly basis data of Kolkata HQ is mentioned in table - 7 of Annexure-I and graphical representation is shown in figure - 73.

Table 41: Ambient Noise Level Data of Kolkata HQ

Date	Day Leq. (dB(A))	Day Min. (dB(A))	Day Max. (dB(A))	Night Leq. (dB(A))	Night Min. (dB(A))	Night Max. (dB(A))	Limit Day dB(A) 6AM to 10PM	Limit Day dB(AA) 10PM to 6AM
15-10-2014	76	58	**105**	56	50	61	65	55
16-10-2014	64	58	67	56	50	60	65	55
17-10-2014	64	59	67	57	54	61	65	55
18-10-2014	62	59	66	57	52	61	65	55
19-10-2014	62	58	66	57	52	62	65	55
20-10-2014	64	58	69	56	51	61	65	55
21-10-2014	64	59	68	57	**50**	64	65	55
22-10-2014	64	59	67	58	52	65	65	55
23-10-2014	63	58	69	59	51	**66**	65	55
24-10-2014	63	58	68	61	54	**66**	65	55
25-10-2014	62	**57**	66	59	52	65	65	55
26-10-2014	63	**57**	69	57	51	64	65	55
27-10-2014	64	**57**	67	56	52	61	65	55
28-10-2014	64	58	67	56	**50**	61	65	55
29-10-2014	64	59	67	56	52	60	65	55
30-10-2014	64	59	66	59	53	**66**	65	55

Close examination to above data reveals following observations:

- At Kolkata HQ, Sound level data exceed the prescribed limit of 65 dB (A) (day time) for 01 day whereas sound level always above the prescribe limits of 55 dB (A) (night time).
- Sound level data varies from 57 dB(A) (25, 26-27/10/2014) to 105 dB(A) (15/10/2014) for day time and during night time sound level data ranges from 50 dB(A) (21-28/10/2014) to 66dB(A) (23, 24-30/10/2014).

- Hourly basis data revels the maximum sound level of 93 dB(A) at 01.00 PM during 15/10/2014 whereas minimum sound level of 51 dB(A) was observed at various occasion.

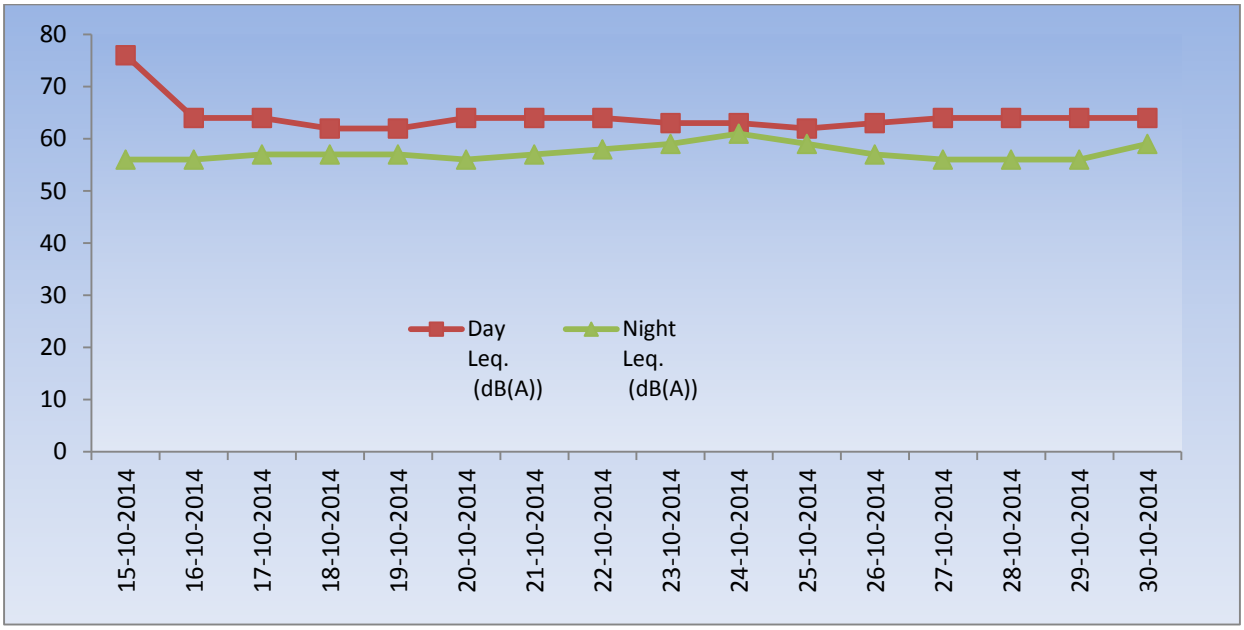

Figure 72: Ambient Noise level trend of Kolkata HQ

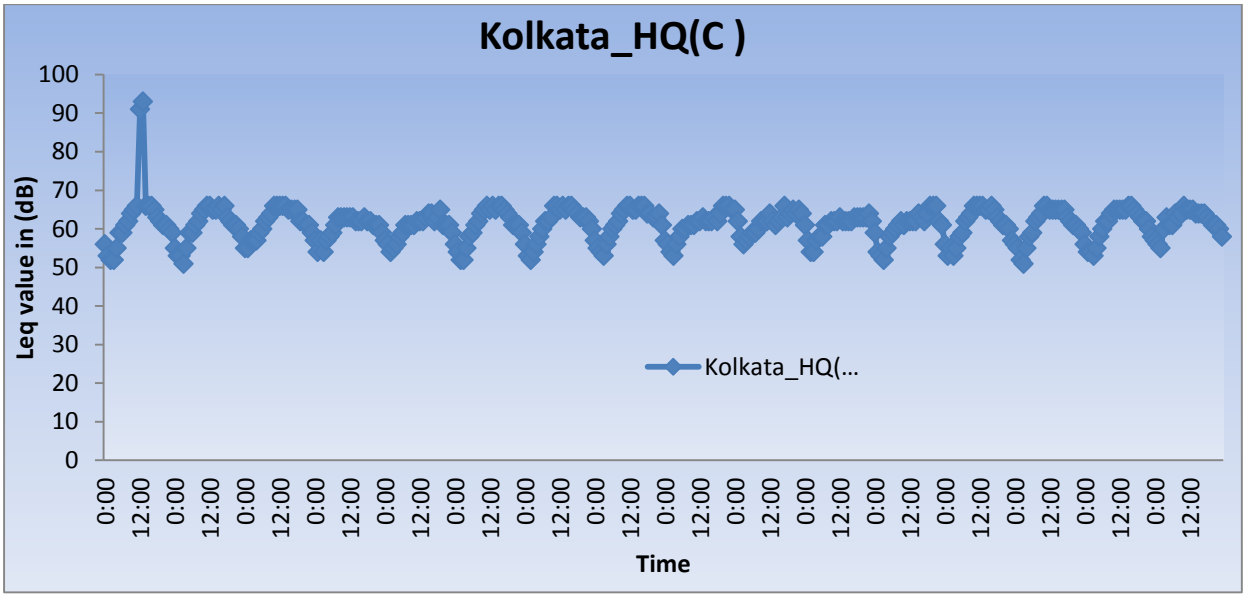

Figure 73: Ambient Noise level trend of Kolkata HQ on hourly basis

6.14.4 NOISE MONITORING STATION AT PATAULI

The noise monitoring station is installed at Patauli. The station fall under the category of residential zone having prescribed limits of 55 dB(A) for day time and 45 dB (A) for night time. The GPS coordinate **22°28' 21.07'' N** and **88°23' 29.71'' E**. The ambient

noise monitoring data for the period 15/10/2014 to 30/10/2014 is placed in table - 42. Figure - 74 show the trend of Patauli station for day-night time. Hourly basis data of Patauli is mentioned in table - 7 of Annexure-I and graphical representation is shown in figure - 75.

Table 42: Ambient Noise Level Data of Patauli

Date	Day Leq. (dB(A))	Day Min. (dB(A))	Day Max. (dB(A))	Night Leq. (dB(A))	Night Min. (dB(A))	Night Max. (dB(A))	Limit Day dB(A) 6AM to 10PM	Limit Day dB(AA) 10PM to 6AM
15-10-2014	73	49	**103**	50	46	55	55	45
16-10-2014	78	50	102	50	46	56	55	45
17-10-2014	73	52	**103**	50	46	55	55	45
18-10-2014	74	52	**103**	50	47	56	55	45
19-10-2014	54	**48**	59	50	45	54	55	45
20-10-2014	55	49	61	50	45	60	55	45
21-10-2014	55	50	60	49	44	56	55	45
22-10-2014	55	49	60	50	43	56	55	45
23-10-2014	61	49	75	55	45	66	55	45
24-10-2014	57	**48**	68	55	47	65	55	45
25-10-2014	57	50	72	54	45	64	55	45
26-10-2014	57	**48**	71	60	44	**77**	55	45
27-10-2014	54	50	60	51	43	63	55	45
28-10-2014	54	50	63	48	43	57	55	45
29-10-2014	55	51	69	49	**42**	57	55	45
30-10-2014	55	50	62	52	43	63	55	45

Close examination to above data reveals following observations:

- At Patauli, Sound level data exceed the prescribed limit of 55 dB(A) (day time) for 08 day whereas sound level always above the prescribe limits of 45 dB(A) (night time).
- Sound level data varies from 48 dB(A) (19, 24-26/10/2014) to 103 dB(A) (15, 17-18/10/2014) for day time and during night time sound level data ranges from 42 dB(A) (29/10/2014) to 77 dB(A) (26/10/2014).

- Hourly basis data revels the maximum sound level of 98 dB(A) at 04.00 P.M during 17/10/2014 whereas minimum sound level of 44 dB(A) was observed at various occasion.

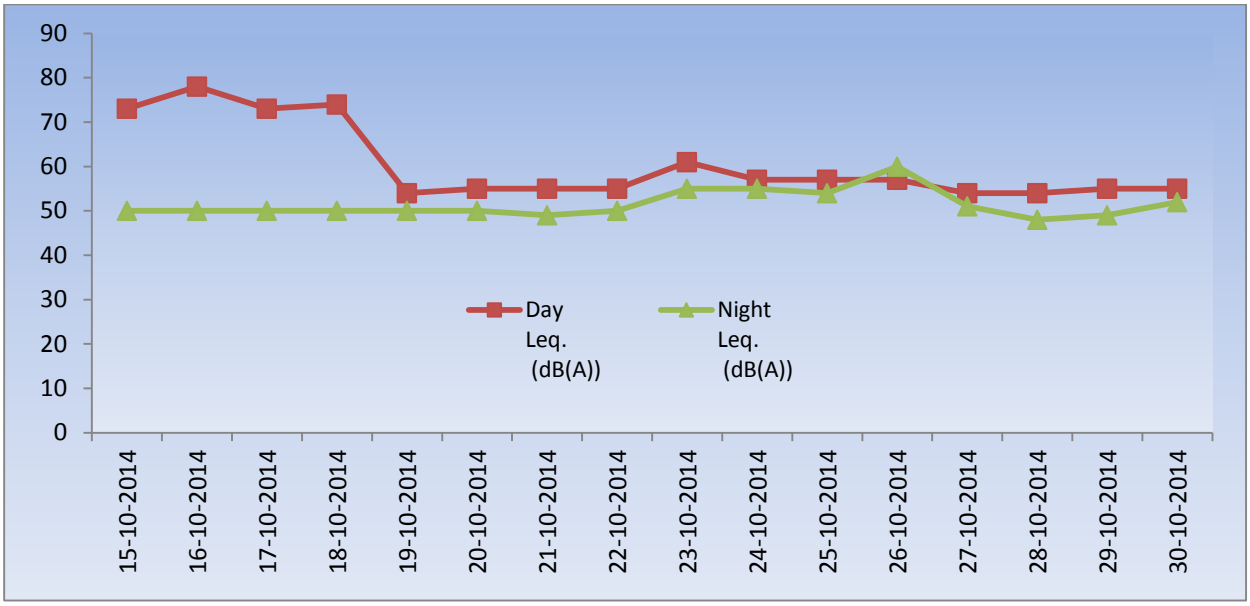

Figure 74: Ambient Noise level trend of Patauli

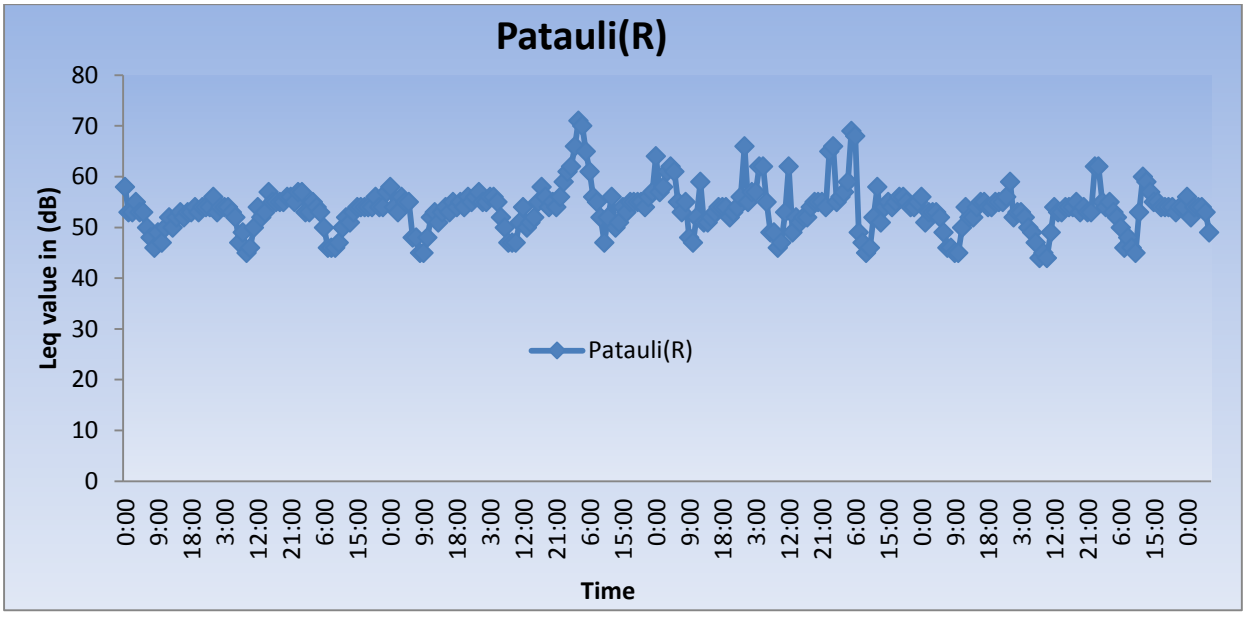

Figure 75: Ambient Noise level trend of Patauli on hourly basis

6.14.5 NOISE MONITORING STATION AT NEW MARKET

The noise monitoring station is installed at New Market and station comes into category of commercial zone having prescribed limits of 65 dB(A) for day time and 55 dB(A) for night time. The GPS coordinate **22°33' 41.4'' N** and **88°21' 10.4'' E**. The ambient noise monitoring data for the period 15/10/2014 to 30/10/2014 is placed in table - 43. Figure -

76 show the trend of New Market Station for day-night time. Hourly basis data of New Market is mentioned in table - 7 of Annexure-I and graphical representation is shown in figure - 77.

Table 43: Ambient Noise Level Data of New Market

Date	Day Leq. (dB(A))	Day Min. (dB(A))	Day Max. (dB(A))	Night Leq. (dB(A))	Night Min. (dB(A))	Night Max. (dB(A))	Limit Day dB(A) 6AM to 10PM	Limit Day dB(AA) 10PM to 6AM
15-10-2014	74	70	80	72	68	76	65	55
16-10-2014	75	**67**	84	73	68	78	65	55
17-10-2014	75	69	86	72	68	76	65	55
18-10-2014	78	70	89	72	67	78	65	55
19-10-2014	75	**67**	87	74	70	83	65	55
20-10-2014	74	69	82	73	68	76	65	55
21-10-2014	73	68	78	72	69	75	65	55
22-10-2014	72	68	77	72	69	77	65	55
23-10-2014	72	68	80	73	69	80	65	55
24-10-2014	78	69	**93**	74	70	80	65	55
25-10-2014	77	71	84	74	70	81	65	55
26-10-2014	79	70	90	77	70	**91**	65	55
27-10-2014	73	68	84	73	69	78	65	55
28-10-2014	74	68	87	75	69	87	65	55
29-10-2014	75	71	91	73	**66**	82	65	55
30-10-2014	74	70	81	74	69	80	65	55

Close examination to above data reveals following observations:

- Sound level data at New Market always exceed the prescribed limit of day and night time.
- Sound level data ranges from 67 dB(A) (16-19/10/2014) to 93 dB(A) (24/10/2014) for day time and during night time sound level data varies from 66 dB(A) (29/10/2014) to 91 dB(A) (26/10/2014).
- Hourly basis data shows that the maximum sound level of 87 dB(A) at 10.00 P.M during 26/10/2014 whereas minimum sound level of 69 dB(A) was observed at 06.00 AM during 16-24/10/2014.

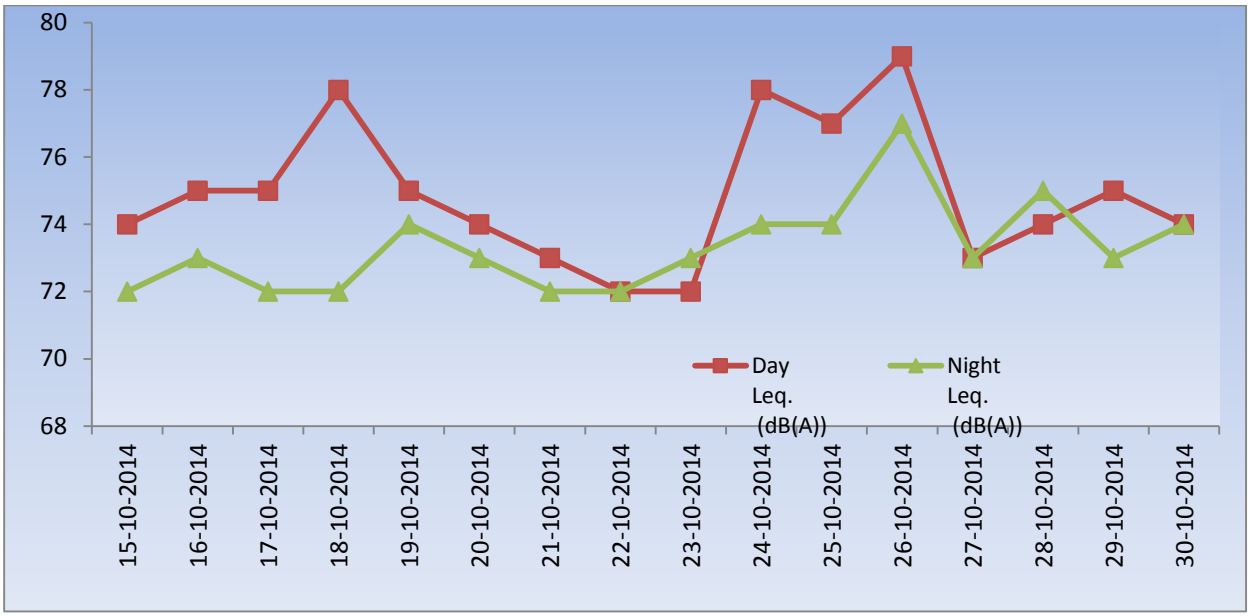

Figure 76: Ambient Noise level trend of New Market

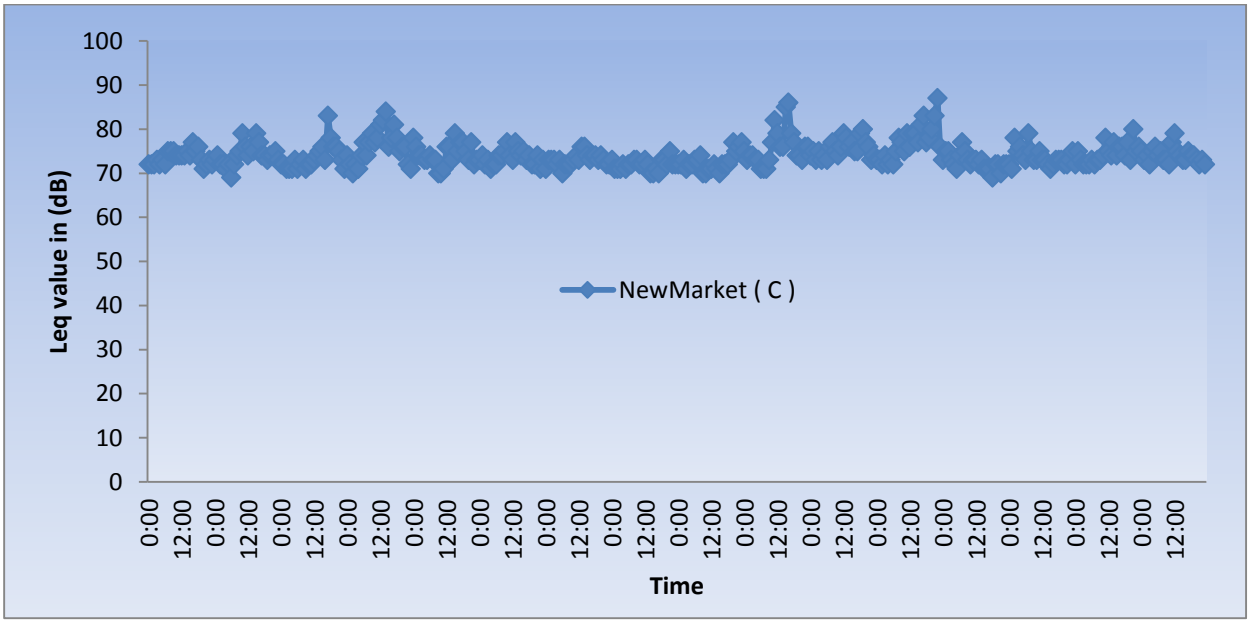

Figure 77: Ambient Noise level trend of New Market on hourly basis

7.0 CONCLUSION

Real Time Continuous Ambient Noise Monitoring was conducted at 35 locations in seven cities (Delhi, Mumbai, Chennai, Kolkata, Lucknow, Bangalore and Hyderabad) on the occasion of Deepawali and pre-Deepawali. During Pre-Deepawali days, sound level ranges between 55 dB(A) to 65 dB(A) and maximum exceedence of prescribed standards was observed in Lucknow, Delhi followed by Mumbai and Chennai.

During Deepawali night, sound level observed from all 35 stations reveals the exceedence in comparison to normal pre-deepwali days.

8.0 RECOMMENDATIONS

i. Noise pollution can be control when the sense of understanding of the effects of noise on the other end is percepted. Awareness programme shall be organizes as most of the noise is generated because of improper and inefficient usage of resources.
ii. Residential colonies should be constructed with such a architectural design as to reduce the level of noise reverberation.
iii. Vegetation buffer zone and road side plantation should be developed in different parts of the city.
iv. Unorganised, highly congested commercial activity should not be encouraged in proximity to the residential colonies.
v. Fire crackers shall be used in control manner and fire cracker burning shall be stopped after 10 P.M.
vi. Mass awareness programme shall be organized in school so that use of fire crackers shall be eliminated.
vii. Residential colonies should not be allowed to grow nearby industrial areas.
viii. The noise generating sources like public address system, music in an occasion on marriage should be kept preferably at low volume and should not be used in the night hours and it should not increase the ambient noise level standards as prescribed by the authority.
ix. Efforts should be made to control noise pollution progressively in the following order: at source, transmitting medium, at receiver.
x. Publishing the legislation reflecting possible consequences of the legal action by Prevention, Prohibition, Payment and Punishment to the public.

ANNEXURE-I

SOUND LEVEL DATA OF SEVEN CITIES ON HOURLY BASIS

Table 1: Sound level data of Delhi on Hourly Basis

Date	Time	Delhi CPCB (C)	DCE (S)	Dilshad Garden (S)	ITO (C)	NSIT (S)
15/10/2014	0:00	53	43	45	70	54
	1:00	52	43	43	69	55
	2:00	50	42	45	68	54
	3:00	47	52	45	68	55
	4:00	47	51	44	68	55
	5:00	53	45	47	67	55
	6:00	59	47	48	72	57
	7:00	64	48	49	74	56
	8:00	65	49	50	75	55
	9:00	67	52	50	75	57
	10:00	69	52	48	75	55
	11:00	68	54	49	75	54
	12:00	69	55	46	71	55
	13:00	68	55	47	71	54
	14:00	68	55	48	71	54
	15:00	67	52	50	71	55
	16:00	66	54	53	71	55
	17:00	66	56	53	71	55
	18:00	66	58	56	73	55
	19:00	65	51	49	73	55
	20:00	65	49	48	73	56
	21:00	63	48	48	73	55
	22:00	61	45	46	71	56
	23:00	57	44	45	69	54
16/10/2014	0:00	55	43	46	70	52
	1:00	51	44	45	68	50
	2:00	49	42	46	68	50
	3:00	48	43	44	68	51
	4:00	48	43	43	68	52
	5:00	52	43	45	67	53
	6:00	59	46	48	73	56
	7:00	64	47	48	74	56
	8:00	65	49	47	74	56
	9:00	67	59	47	75	56

Date	Time	Delhi CPCB (C)	DCE (S)	Dilshad Garden (S)	ITO (C)	NSIT (S)
	10:00	69	61	50	75	55
	11:00	67	54	48	75	55
	12:00	67	53	49	75	55
	13:00	68	50	48	75	55
	14:00	69	52	47	75	55
	15:00	67	52	49	75	55
	16:00	66	52	50	75	56
	17:00	66	53	54	75	56
	18:00	65	56	56	75	56
	19:00	65	51	50	76	56
	20:00	65	49	49	75	55
	21:00	63	47	48	75	56
	22:00	61	45	47	75	53
	23:00	58	44	46	74	52
17/10/2014	0:00	56	43	47	74	51
	1:00	53	42	49	74	52
	2:00	52	43	46	73	51
	3:00	51	43	45	73	51
	4:00	50	42	46	73	52
	5:00	51	44	46	73	53
	6:00	58	47	47	73	56
	7:00	64	49	48	69	57
	8:00	65	48	49	69	55
	9:00	67	53	49	72	56
	10:00	68	51	49	72	55
	11:00	68	52	50	71	54
	12:00	68	51	50	70	55
	13:00	67	51	50	70	56
	14:00	67	52	48	70	55
	15:00	67	52	48	71	55
	16:00	67	51	49	69	56
	17:00	66	53	51	70	55
	18:00	66	58	51	71	56
	19:00	65	52	49	72	56
	20:00	65	50	50	72	57
	21:00	65	47	48	73	57
	22:00	61	46	49	70	56
	23:00	58	45	46	67	54
18/10/2014	0:00	55	43	51	69	52

Date	Time	Delhi CPCB (C)	DCE (S)	Dilshad Garden (S)	ITO (C)	NSIT (S)
	1:00	52	43	47	66	52
	2:00	49	43	47	65	52
	3:00	47	43	49	65	52
	4:00	47	43	50	65	52
	5:00	52	46	51	66	54
	6:00	58	47	47	67	56
	7:00	62	48	49	72	55
	8:00	64	49	47	74	56
	9:00	67	50	46	75	56
	10:00	69	49	47	75	56
	11:00	68	49	49	75	55
	12:00	68	49	48	75	54
	13:00	67	49	48	75	55
	14:00	66	50	49	75	54
	15:00	66	51	49	75	55
	16:00	66	48	50	75	55
	17:00	66	51	52	75	56
	18:00	65	53	50	75	57
	19:00	65	50	49	74	58
	20:00	65	48	51	74	59
	21:00	64	48	48	74	58
	22:00	62	46	49	72	57
	23:00	58	46	49	71	56
19/10/2014	0:00	57	45	48	72	54
	1:00	55	43	48	70	52
	2:00	51	44	47	69	51
	3:00	51	44	47	68	52
	4:00	50	44	46	68	51
	5:00	52	45	47	69	52
	6:00	57	47	48	71	54
	7:00	60	48	49	75	53
	8:00	61	51	48	75	55
	9:00	63	48	49	75	54
	10:00	64	47	48	74	54
	11:00	64	47	48	74	54
	12:00	64	46	47	74	54
	13:00	64	47	47	75	54
	14:00	65	46	48	75	53
	15:00	64	47	50	75	54

Date	Time	Delhi CPCB (C)	DCE (S)	Dilshad Garden (S)	ITO (C)	NSIT (S)
	16:00	64	50	50	74	55
	17:00	65	50	53	75	55
	18:00	64	50	51	75	58
	19:00	64	49	51	75	58
	20:00	64	48	52	75	58
	21:00	64	48	50	76	58
	22:00	61	47	48	75	57
	23:00	59	46	49	75	55
20/10/2014	0:00	55	45	46	76	54
	1:00	53	44	45	75	52
	2:00	52	44	45	75	51
	3:00	57	46	45	74	50
	4:00	50	45	45	75	51
	5:00	52	46	46	74	53
	6:00	58	48	49	73	56
	7:00	64	50	49	70	56
	8:00	65	50	48	71	55
	9:00	67	53	48	72	56
	10:00	68	53	48	72	55
	11:00	68	54	48	72	55
	12:00	68	52	48	71	55
	13:00	68	52	49	71	89
	14:00	68	52	50	72	58
	15:00	68	65	50	72	59
	16:00	67	89	52	75	60
	17:00	66	56	54	75	60
	18:00	66	57	53	75	61
	19:00	66	54	51	76	62
	20:00	65	53	50	76	62
	21:00	63	51	51	76	62
	22:00	62	50	49	74	61
	23:00	59	52	47	74	59
21/10/2014	0:00	58	48	46	74	58
	1:00	53	48	45	74	56
	2:00	51	48	45	73	54
	3:00	49	48	44	74	54
	4:00	48	48	44	74	53
	5:00	51	49	45	74	56
	6:00	58	52	48	74	59

Date	Time	Delhi CPCB (C)	DCE (S)	Dilshad Garden (S)	ITO (C)	NSIT (S)
	7:00	64	52	47	70	59
	8:00	65	52	49	70	59
	9:00	67	55	48	71	58
	10:00	68	56	48	71	58
	11:00	67	55	89	71	57
	12:00	68	55	55	70	57
	13:00	75	54	51	70	58
	14:00	86	54	52	70	58
	15:00	71	54	51	71	58
	16:00	70	56	52	69	59
	17:00	71	55	57	70	61
	18:00	70	57	58	71	61
	19:00	68	53	58	72	62
	20:00	69	53	58	72	61
	21:00	68	51	59	73	61
	22:00	66	49	57	70	62
	23:00	64	50	52	67	60
22/10/2014	0:00	62	48	51	74	57
	1:00	57	47	50	73	56
	2:00	66	47	50	73	54
	3:00	58	47	50	73	55
	4:00	54	48	47	73	55
	5:00	55	49	49	73	58
	6:00	61	51	51	74	60
	7:00	65	52	53	74	60
	8:00	68	53	52	74	59
	9:00	70	53	52	75	57
	10:00	71	53	55	93	57
	11:00	71	54	54	86	57
	12:00	71	51	52	74	57
	13:00	70	52	51	74	57
	14:00	70	51	52	75	57
	15:00	71	51	52	76	58
	16:00	71	53	55	74	59
	17:00	70	55	56	76	59
	18:00	70	53	60	76	63
	19:00	70	54	61	76	63
	20:00	70	56	63	76	63
	21:00	69	58	62	76	63

Date	Time	Delhi CPCB (C)	DCE (S)	Dilshad Garden (S)	ITO (C)	NSIT (S)
	22:00	69	56	60	75	61
	23:00	64	58	58	74	58
23/10/2014	0:00	62	50	53	74	56
	1:00	59	47	49	71	54
	2:00	58	47	48	71	52
	3:00	56	48	48	71	54
	4:00	54	47	49	72	55
	5:00	56	47	50	73	56
	6:00	61	49	52	76	58
	7:00	63	52	51	79	58
	8:00	64	51	57	79	57
	9:00	66	51	52	79	56
	10:00	67	51	53	79	56
	11:00	68	49	51	79	55
	12:00	68	51	53	79	56
	13:00	68	49	54	79	56
	14:00	67	48	54	79	56
	15:00	68	51	56	79	57
	16:00	69	52	61	79	58
	17:00	69	53	61	79	59
	18:00	69	58	64	80	65
	19:00	70	65	69	80	67
	20:00	73	69	76	80	72
	21:00	79	74	80	81	74
	22:00	81	76	81	81	75
	23:00	80	73	77	79	71
24/10/2014	0:00	76	68	72	79	64
	1:00	69	60	64	79	56
	2:00	59	58	55	79	50
	3:00	57	57	51	78	49
	4:00	52	56	50	79	48
	5:00	55	53	53	79	51
	6:00	60	50	55	73	54
	7:00	62	51	54	72	56
	8:00	64	53	55	72	55
	9:00	66	51	57	73	56
	10:00	68	52	55	74	57
	11:00	69	51	54	74	56
	12:00	68	51	53	74	55

Date	Time	Delhi CPCB (C)	DCE (S)	Dilshad Garden (S)	ITO (C)	NSIT (S)
	13:00	68	50	52	74	56
	14:00	68	49	51	74	55
	15:00	69	50	53	74	55
	16:00	67	51	60	73	56
	17:00	68	52	59	74	58
	18:00	68	56	63	76	62
	19:00	68	59	67	78	64
	20:00	69	60	68	76	63
	21:00	68	60	67	76	62
	22:00	67	58	65	73	60
	23:00	62	54	59	71	57
25/10/2014	0:00	58	48	52	71	55
	1:00	55	46	49	70	51
	2:00	52	48	46	69	50
	3:00	49	47	46	69	51
	4:00	53	46	48	70	54
	5:00	55	47	49	72	53
	6:00	59	50	56	73	56
	7:00	62	52	51	75	57
	8:00	64	51	51	79	57
	9:00	67	54	51	79	56
	10:00	69	52	50	79	57
	11:00	70	50	50	79	56
	12:00	70	49	51	79	56
	13:00	70	49	52	79	57
	14:00	68	50	51	79	56
	15:00	69	52	54	79	56
	16:00	68	58	56	79	57
	17:00	69	51	57	79	58
	18:00	68	53	60	80	60
	19:00	68	53	60	80	59
	20:00	67	53	61	80	59
	21:00	66	53	62	80	58
	22:00	65	53	60	79	56
	23:00	62	50	56	78	54
26/10/2014	0:00	58	48	51	79	52
	1:00	56	47	49	78	50
	2:00	58	47	48	78	49
	3:00	56	47	47	78	50

Date	Time	Delhi CPCB (C)	DCE (S)	Dilshad Garden (S)	ITO (C)	NSIT (S)
	4:00	50	46	47	78	52
	5:00	51	47	49	78	53
	6:00	58	49	51	79	55
	7:00	63	51	52	75	56
	8:00	64	51	52	74	55
	9:00	66	51	56	75	56
	10:00	67	50	52	75	58
	11:00	67	50	51	75	60
	12:00	68	51	50	75	59
	13:00	68	50	49	75	57
	14:00	67	49	49	75	56
	15:00	67	53	55	76	56
	16:00	68	53	56	75	56
	17:00	67	52	55	76	58
	18:00	67	51	54	78	60
	19:00	67	51	55	78	59
	20:00	67	52	54	78	59
	21:00	64	51	53	77	59
	22:00	63	49	55	75	58
	23:00	61	48	50	74	56
27/10/2014	0:00	57	47	48	75	55
	1:00	54	46	49	73	55
	2:00	53	47	50	70	54
	3:00	51	46	48	70	53
	4:00	50	46	47	71	54
	5:00	55	47	50	71	56
	6:00	62	49	51	76	59
	7:00		52	52	79	60
	8:00		54	51	79	58
	9:00		57	50	80	59
	10:00	92	56	51	80	59
	11:00	78	56	50	79	58
	12:00	74	56	50	79	58
	13:00	71	55	49	79	57
	14:00	71	56	49	79	57
	15:00	70	55	50	79	58
	16:00	70	56	53	79	61
	17:00	70	56	57	79	71
	18:00	69	57	58	80	74

Date	Time	Delhi CPCB (C)	DCE (S)	Dilshad Garden (S)	ITO (C)	NSIT (S)
	19:00	68	52	57	80	59
	20:00	68	51	54	80	59
	21:00	66	51	53	80	59
	22:00	63	49	52	79	57
	23:00	62	48	51	79	56
28/10/2014	0:00	57	47	54	80	55
	1:00	54	47	48	79	53
	2:00	53	46	48	79	53
	3:00	51	45	48	79	53
	4:00	51	46	47	79	55
	5:00	55	47	50	79	56
	6:00	63	50	52	79	59
	7:00	68	51	53	75	60
	8:00	69	51	51	74	57
	9:00	72	57	50	76	59
	10:00	73	54	50	76	65
	11:00	71	53	50	76	63
	12:00	72	55	55	76	61
	13:00	71	55	51	76	59
	14:00	71	54	53	76	59
	15:00	70	55	50	76	58
	16:00	70	55	54	76	58
	17:00	70	56	55	74	60
	18:00	69	57	53	77	59
	19:00	69	54	53	77	60
	20:00	68	54	53	78	59
	21:00	66	51	50	78	60
	22:00	64	48	51	75	57
	23:00	64	47	49	74	54
29/10/2014	0:00	58	46	48	75	52
	1:00	52	45	48	73	53
	2:00	51	45	46	71	52
	3:00	53	46	50	72	50
	4:00	51	47	48	72	53
	5:00	53	46	49	72	55
	6:00	61	48	50	72	55
	7:00	66	51	51	77	58
	8:00	67	51	52	79	57
	9:00	70	52	53	79	56

Date	Time	Delhi CPCB (C)	DCE (S)	Dilshad Garden (S)	ITO (C)	NSIT (S)
	10:00	71	52	52	79	56
	11:00	70	52	58	79	57
	12:00	70	53	62	79	56
	13:00	70	50	62	78	58
	14:00	70	51	57	79	57
	15:00	69	52	57	79	58
	16:00	69	55	62	79	60
	17:00	69	59	65	79	63
	18:00	69	56	56	81	63
	19:00	68	54	52	81	62
	20:00	68	53	52	81	61
	21:00	66	51	51	81	61
	22:00	64	52	51	78	60
	23:00	60	49	52	78	58
30/10/2014	0:00	59	48	49	79	56
	1:00	56	48	49	78	54
	2:00	54	48	47	78	53
	3:00	52	49	47	78	54
	4:00	55	53	49	78	58
	5:00	57	56	52	78	61
	6:00	62	58	55	78	62
	7:00	69	56	53	73	60
	8:00	70	53	53	73	57
	9:00	71	55	54	76	58
	10:00	72	53	52	76	57
	11:00	71	53	51	74	57
	12:00	71	55	53	75	57
	13:00	71	54	50	74	58
	14:00	71	54	51	74	58
	15:00	71	54	51	74	60
	16:00	70	54	58	74	58
	17:00	70	55	58	75	60
	18:00	70	58	55	78	60
	19:00	69	52	53	78	61
	20:00	69	52	53	77	61
	21:00	68	53	53	78	62
	22:00	65	48	53	75	60
	23:00	62	47	49	72	58

Table 2: Sound level data of Mumbai on Hourly Basis

Date	Time	Ashp (S)	Bandra (C)	MPCB HQ (C)	Thane(C)	VashiHospital(S)
15/10/2014	0:00	61	68	69	60	59
	1:00	60	67	67	58	59
	2:00	59	65	68	58	58
	3:00	58	64	70	56	55
	4:00	60	66	69	53	57
	5:00	61	67	70	59	56
	6:00	62	68	70	61	61
	7:00	62	68	69	62	65
	8:00	63	69	70	63	65
	9:00	63	68	71	63	67
	10:00	64	69	71	65	68
	11:00	64	68	70	64	70
	12:00	64	68	69	65	69
	13:00	64	69	69	65	69
	14:00	64	68	69	63	68
	15:00	63	68	68	63	68
	16:00	63	69	69	63	68
	17:00	64	69	69	63	69
	18:00	62	69	70	65	69
	19:00	63	69	70	62	70
	20:00	62	69	71	61	69
	21:00	63	71	71	59	68
	22:00	61	69	70	59	66
	23:00	60	68	69	58	63
16/10/2014	0:00	58	68	67	57	60
	1:00	57	67	66	58	58
	2:00	57	65	66	59	55
	3:00	56	65	68	58	52
	4:00	58	65	68	57	54
	5:00	61	66	69	58	56
	6:00	63	68	70	60	60

Date	Time	Ashp (S)	Bandra (C)	MPCB HQ (C)	Thane(C)	VashiHospital(S)
	7:00	65	69	70	61	67
	8:00	65	69	72	64	68
	9:00	66	70	73	64	75
	10:00	66	70	73	65	72
	11:00	66	70	71	65	74
	12:00	65	69	70	66	75
	13:00	65	69	70	65	71
	14:00	65	70	70	65	71
	15:00	66	70	70	65	72
	16:00	65	70	70	65	69
	17:00	65	70	71	64	69
	18:00	65	70	73	64	71
	19:00	64	69	72	63	70
	20:00	65	69	72	62	70
	21:00	65	69	72	62	69
	22:00	64	69	71	60	67
	23:00	63	69	70	58	64
17/10/2014	0:00	62	68	69	57	60
	1:00	59	66	67	58	57
	2:00	59	65	68	57	54
	3:00	57	64	70	54	53
	4:00	59	65	70	51	55
	5:00	62	66	70	57	58
	6:00	64	67	71	62	63
	7:00	65	68	71	64	70
	8:00	65	69	72	64	68
	9:00	66	70	74	65	74
	10:00	65	70	72	66	75
	11:00	66	70	72	66	74
	12:00	66	70	71	66	75
	13:00	65	69	72	65	72
	14:00	66	69	71	65	70
	15:00	66	69	70	65	72
	16:00	65	69	71	65	69
	17:00	65	69	71	65	69
	18:00	65	70	72	65	70
	19:00	65	68	72	63	70
	20:00	65	68	72	62	70

Date	Time	Ashp (S)	Bandra (C)	MPCB HQ (C)	Thane(C)	VashiHospital(S)
	21:00	65	69	72	62	69
	22:00	64	83	72	60	67
	23:00	62	69	70	60	64
18/10/2014	0:00	60	69	69	58	59
	1:00	59	68	68	56	58
	2:00	60	66	69	52	55
	3:00	58	66	71	53	52
	4:00	61	66	71	55	54
	5:00	62	67	71	59	54
	6:00	63	68	71	62	62
	7:00	64	69	71	64	68
	8:00	65	69	71	65	68
	9:00	66	70	72	67	70
	10:00	66	70	71	67	72
	11:00	66	70	70	66	75
	12:00	66	70	70	66	74
	13:00	65	70	70	66	71
	14:00	66	70	71	66	69
	15:00	66	70	71	67	68
	16:00	65	70	71	66	68
	17:00	66	71	71	66	70
	18:00	65	71	72	67	71
	19:00	65	69	71	64	70
	20:00	65	69	71	63	71
	21:00	66	70	71	62	69
	22:00	64	70	71	61	67
	23:00	63	69	70	59	63
19/10/2014	0:00	61	69	68	58	60
	1:00	60	68	66	56	58
	2:00	58	67	67	55	55
	3:00	59	66	68	56	54
	4:00	59	66	68	58	56
	5:00	62	67	68	58	57
	6:00	62	68	69	61	61
	7:00	63	69	70	63	63
	8:00	63	69	69	66	66
	9:00	63	68	69	63	67
	10:00	63	69	69	64	68

Date	Time	Ashp (S)	Bandra (C)	MPCB HQ (C)	Thane(C)	VashiHospital(S)
	11:00	63	69	69	65	68
	12:00	63	69	68	65	69
	13:00	63	70	68	63	68
	14:00	63	69	69	61	68
	15:00	64	69	69	62	66
	16:00	63	70	69	62	67
	17:00	64	70	69	63	69
	18:00	63	70	70	69	71
	19:00	63	70	68	66	70
	20:00	63	70	69	70	70
	21:00	62	69	72	70	69
	22:00	62	69	71	63	66
	23:00	61	68	69	59	62
20/10/2014	0:00	58	67	67	60	59
	1:00	58	66	64	59	55
	2:00	58	64	65	58	61
	3:00	58	64	67	56	52
	4:00	59	65	68	54	53
	5:00	61	66	69	57	54
	6:00	63	68	69	61	61
	7:00	64	69	71	63	64
	8:00	65	69	72	63	66
	9:00	65	70	73	65	70
	10:00	65	70	72	66	71
	11:00	65	70	71	66	72
	12:00	65	70	70	66	72
	13:00	65	70	71	66	71
	14:00	66	70	70	66	70
	15:00	66	71	71	66	69
	16:00	66	73	71	66	69
	17:00	65	73	71	67	70
	18:00	70	72	72	67	70
	19:00	65	69	72	63	71
	20:00	65	69	71	62	70
	21:00	66	70	72	61	69
	22:00	64	70	72	60	67
	23:00	62	70	71	60	64
21/10/2014	0:00	60	68	69	58	59

Date	Time	Ashp (S)	Bandra (C)	MPCB HQ (C)	Thane(C)	VashiHospital(S)
	1:00	59	67	67	57	57
	2:00	59	66	69	57	53
	3:00	57	65	71	57	53
	4:00	60	65	70	56	56
	5:00	62	67	69	60	57
	6:00	62	68	70	62	61
	7:00	64	69	72	63	63
	8:00	65	70	72	64	66
	9:00	65	72	73	66	69
	10:00	65	73	73	66	70
	11:00	66	72	71	66	72
	12:00	66	71	71	66	71
	13:00	66	70	71	67	70
	14:00	65	70	70	66	68
	15:00	65	70	71	65	68
	16:00	66	71	71	65	68
	17:00	65	71	71	65	69
	18:00	65	70	73	65	70
	19:00	75	69	72	63	70
	20:00	66	69	72	63	70
	21:00	65	69	72	62	70
	22:00	65	69	71	63	68
	23:00	62	69	71	59	65
22/10/2014	0:00	60	68	69	58	62
	1:00	59	67	67	58	58
	2:00	58	65	68	56	56
	3:00	59	64	70	56	53
	4:00	59	66	69	57	53
	5:00	63	67	69	61	56
	6:00	64	68	71	65	62
	7:00	65	70	71	69	65
	8:00	65	70	72	70	67
	9:00	66	71	73	67	68
	10:00	66	71	73	66	70
	11:00	67	71	71	66	70
	12:00	66	71	71	65	71
	13:00	70	70	71	64	69
	14:00	65	70	71	63	68

Date	Time	Ashp (S)	Bandra (C)	MPCB HQ (C)	Thane(C)	VashiHospital(S)
	15:00	65	72	72	63	67
	16:00	65	73	71	63	68
	17:00	66	70	72	64	69
	18:00	64	70	73	65	71
	19:00	65	70	72	68	71
	20:00	73	70	72	69	70
	21:00	66	70	72	68	70
	22:00	65	69	71	67	69
	23:00	63	69	70	61	64
23/10/2014	0:00	60	68	68	59	61
	1:00	60	67	66	56	57
	2:00	59	66	68	54	55
	3:00	59	65	69	50	54
	4:00	59	66	67	51	54
	5:00	61	68	68	58	57
	6:00	64	68	69	64	61
	7:00	63	68	69	63	63
	8:00	63	68	68	62	65
	9:00	65	69	69	62	67
	10:00	66	69	69	64	69
	11:00	64	69	69	64	70
	12:00	64	69	69	64	70
	13:00	64	69	69	64	69
	14:00	64	69	69	62	68
	15:00	64	69	68	69	68
	16:00	64	69	70	68	68
	17:00	64	69	69	62	69
	18:00	64	69	69	63	69
	19:00	66	70	69	70	70
	20:00	69	71	71	74	75
	21:00	70	72	71	76	76
	22:00	69	72	70	76	71
	23:00	65	71	68	70	69
24/10/2014	0:00	61	69	66	61	63
	1:00	58	68	63	59	61
	2:00	57	66	63	56	55
	3:00	58	65	64	57	53
	4:00	66	65	65	56	52

Date	Time	Ashp (S)	Bandra (C)	MPCB HQ (C)	Thane(C)	VashiHospital(S)
	5:00	65	66	67	57	54
	6:00	64	67	67	64	59
	7:00	63	68	68	63	63
	8:00	64	68	69	61	64
	9:00	64	69	70	63	66
	10:00	65	70	70	64	67
	11:00	64	72	69	64	70
	12:00	65	72	68	63	70
	13:00	64	71	70	61	69
	14:00	64	71	68	61	68
	15:00	64	72	69	62	68
	16:00	65	72	69	62	67
	17:00	63	71	70	62	68
	18:00	63	70	70	65	70
	19:00	65	69	69	66	71
	20:00	67	70	70	68	72
	21:00	65	70	70	67	70
	22:00	65	70	70	67	68
	23:00	62	69	68	67	66
25/10/2014	0:00	59	68	65	61	63
	1:00	58	66	63	57	59
	2:00	55	65	63	56	53
	3:00	56	64	65	55	52
	4:00	57	65	75	56	53
	5:00	60	66		59	55
	6:00	61	67		64	61
	7:00	63	68		61	63
	8:00	63	69		61	65
	9:00	64	69	90	62	67
	10:00	66	70	74	64	69
	11:00	65	70	96	63	70
	12:00	67	70	81	65	70
	13:00	69	71	70	65	70
	14:00	69	70	70	64	69
	15:00	66	70	70	62	69
	16:00	65	70	81	61	69
	17:00	64	70		62	69
	18:00	65	70		65	70

Date	Time	Ashp (S)	Bandra (C)	MPCB HQ (C)	Thane(C)	VashiHospital(S)
	19:00	65	69		66	71
	20:00	66	71		69	71
	21:00	66	70		68	72
	22:00	66	71		69	69
	23:00	63	71		71	65
26/10/2014	0:00	59	69		63	60
	1:00	58	67		57	56
	2:00	57	66		56	55
	3:00	58	65		56	54
	4:00	58	65		48	53
	5:00	61	66		58	54
	6:00	65	67		61	59
	7:00	67	68		62	62
	8:00	63	69		62	65
	9:00	65	69	76	62	66
	10:00	66	69	69	63	67
	11:00	65	69	69	63	68
	12:00	65	69	69	64	68
	13:00	64	70	69	63	68
	14:00	64	69	69	63	68
	15:00	65	69	69	62	67
	16:00	65	70	69	62	68
	17:00	64	70	69	62	69
	18:00	63	70	69	62	69
	19:00	64	69		62	70
	20:00	64	68		62	69
	21:00	63	69		61	67
	22:00	62	69		60	65
	23:00	61	69		61	63
27/10/2014	0:00	59	67		59	60
	1:00	56	66		56	56
	2:00	58	64		54	55
	3:00	57	64		47	52
	4:00	59	65		49	52
	5:00	60	66		58	53
	6:00	63	68		62	61
	7:00	63	69		61	63
	8:00	65	70	88	62	67

Date	Time	Ashp (S)	Bandra (C)	MPCB HQ (C)	Thane(C)	VashiHospital(S)
	9:00	66	70	80	63	70
	10:00	65	70	75	66	73
	11:00	65	71		66	73
	12:00	65	70	85	66	73
	13:00	66	70	87	65	72
	14:00	67	70	79	65	70
	15:00	66	70	70	65	69
	16:00	66	71	71	65	70
	17:00	65	72		65	70
	18:00	64	71		68	70
	19:00	64	71		63	70
	20:00	64	70		62	70
	21:00	64	70		60	69
	22:00	63	70		59	67
	23:00	62	70		59	63
28/10/2014	0:00	59	68		56	60
	1:00	58	68		49	57
	2:00	58	66		57	53
	3:00	57	65		56	52
	4:00	61	65		56	52
	5:00	62	67		60	72
	6:00	62	68		61	96
	7:00	63	69		61	92
	8:00	64	69	85	61	67
	9:00	65	70	74	64	70
	10:00	66	70	73	65	71
	11:00	65	70	71	66	72
	12:00	65	70	71	65	72
	13:00	65	71	71	65	70
	14:00	65	70	70	64	69
	15:00	66	72	70	64	68
	16:00	66	71	70	64	68
	17:00	65	70	71	64	69
	18:00	64	70	73	64	70
	19:00	64	70	72	62	70
	20:00	65	69	71	61	69
	21:00	65	70	72	62	69
	22:00	64	69	72	61	67

Date	Time	Ashp (S)	Bandra (C)	MPCB HQ (C)	Thane(C)	VashiHospital(S)
	23:00	62	69	71	57	64
29/10/2014	0:00	60	67	69	56	61
	1:00	58	66	67	51	57
	2:00	59	65	68	52	53
	3:00	60	64	71	54	52
	4:00	60	65	69	55	54
	5:00	62	66	70	56	56
	6:00	63	68	71	60	60
	7:00	63	69	89	62	65
	8:00	65	70	78	63	67
	9:00	66	70	74	64	70
	10:00	66	70	73	65	71
	11:00	65	70	71	64	72
	12:00	65	69	71	65	72
	13:00	66	70	71	65	71
	14:00	65	69	71	64	70
	15:00	65	70	70	64	69
	16:00	66	71	70	64	68
	17:00	65	70	71	64	69
	18:00	65	70	73	64	70
	19:00	64	70	72	62	70
	20:00	64	69	72	61	70
	21:00	64	70	73	62	67
	22:00	63	69	72	61	66
	23:00	62	69	71	60	63
30/10/2014	0:00	62	67	69	59	59
	1:00	58	66	66	57	55
	2:00	58	64	69	55	54
	3:00	58	64	71	54	55
	4:00	60	65	70	57	55
	5:00	62	66	70	59	59
	6:00	62	67	71	61	61
	7:00	64	69	71	61	66
	8:00	65	69	72	62	68
	9:00	66	70	74	63	69
	10:00	65	70	73	64	71
	11:00	65	70	71	65	72
	12:00	65	70	71	65	71

Date	Time	Ashp (S)	Bandra (C)	MPCB HQ (C)	Thane(C)	VashiHospital(S)
	13:00	64	70	71	65	70
	14:00	66	69	70	65	68
	15:00	65	70	70	65	69
	16:00	65	70	71	64	70
	17:00	65	70	72	65	70
	18:00	64	71	73	66	70
	19:00	64	70	73	64	70
	20:00	65	69	73	62	70
	21:00	64	70	73	61	69
	22:00	63	69	72	59	66
	23:00	61	69	71	61	63

Table 3: Sound level data of Lucknow on Hourly Basis

Date	GomtiNagar(S)	Hazratganj (C)	IndiraNagar(R)	PGI(S)	Talkatora(I)
15/10/2014	61	62	46	55	56
	58	60	50	56	55
	55	58	44	55	52
	56	55	42	54	54
	59	56	42	53	52
	59	59	45	55	53
	62	65	53	58	55
	88	71	59	59	58
	68	70	61	63	58
	70	72	61	66	66
	72	74	60	66	65
	72	74	60	65	67
	70	75	61	65	66
	69	76	59	64	63

Date	GomtiNagar(S)	Hazratganj (C)	IndiraNagar(R)	PGI(S)	Talkatora(I)
	70	78	58	66	65
	69	77	60	66	67
	69	77	60	66	67
	69	77	59	63	67
	69	77	55	64	65
	68	75	56	62	65
	67	74	57	64	65
	65	72	55	61	64
	78	70	50	59	60
	61	67	46	58	56
16/10/2014	60	64	47	53	53
	60	60	47	55	56
	62	58	47	53	55
	59	58	49	52	55
	65	56	47	54	55
	67	60	47	55	54
	85	64	52	59	55
	85	71	58	60	57
	69	70	61	62	58
	71	72	59	65	64
	70	73	60	64	67
	71	74	61	65	67
	70	75	61	65	66
	70	75	58	66	65
	70	76	58	67	67
	69	76	55	66	69
	69	76	58	66	67
	69	77	62	65	66
	68	76	55	64	64
	68	76	58	63	64
	67	76	57	65	62
	65	73	53	62	60
	64	70	61	63	57
	62	68	49	60	57
17/10/2014	59	63	47	62	58
	57	61	48	56	58
	55	59	46	55	58
	55	57	44	56	57

Date	GomtiNagar(S)	Hazratganj (C)	IndiraNagar(R)	PGI(S)	Talkatora(I)
	55	60	44	54	57
	57	62	48	57	58
	66	65	57	60	58
	65	71	60	63	60
	68	70	61	64	62
	70	72	59	67	64
	70	74	61	97	65
	69	74	61	67	68
	70	86	61	64	67
	69	77	59	67	77
	69	77	62	66	91
	68	76	60	64	70
	68	76	57	65	71
	68	76	60	65	71
	68	76	61	62	69
	68	76	62	62	68
	67	74	60	61	68
	66	72	60	60	66
	64	69	55	59	65
	62	68	50	58	60
18/10/2014	61	64	48	56	60
	56	63	45	53	61
	60	61	51	51	59
	55	61	46	51	59
	57	60	47	51	59
	59	64	47	58	60
	62	65	53	57	59
	63	71	59	59	61
	68	70	61	60	63
	68	71	60	63	69
	69	73	61	61	71
	70	75	75	60	70
	71	76	88	60	70
	92	75	63	63	68
	69	76	62	63	70
	69	76	64	62	69
	68	76	63	60	70
	68	76	62	61	73

Date	GomtiNagar(S)	Hazratganj (C)	IndiraNagar(R)	PGI(S)	Talkatora(I)
	69	76	56	62	68
	68	76	58	62	68
	67	75	56	63	68
	66	74	53	58	65
	64	71	49	59	66
	62	69	50	60	62
19/10/2014	60	67	52	53	62
	57	65	55	55	62
	56	66	49	51	62
	56	64	55	51	63
	56	60	50	55	61
	58	63	49	55	61
	63	64	53	60	64
	65	67	56	57	66
	66	69	57	59	64
	66	70	61	58	67
	66	70	62	58	67
	67	71	62	60	72
	67	73	63	58	69
	68	73	55	58	66
	69	73	62	58	66
	69	74	57	57	68
	67	74	59	58	67
	69	76	62	58	66
	67	76	56	60	64
	68	75	58	59	63
	67	74	56	58	61
	65	73	53	59	63
	65	71	52	59	60
	63	68	50	52	59
20/10/2014	60	66	49	49	59
	58	61	47	51	60
	55	61	55	56	59
	54	58	47	52	58
	60	61	50	49	55
	59	62	51	59	58
	65	65	59	60	59
	66	71	63	60	62

Date	GomtiNagar(S)	Hazratganj (C)	IndiraNagar(R)	PGI(S)	Talkatora(I)
	68	71	60	62	65
	69	71	61	64	68
	70	73	60	65	71
	70	74	60	65	71
	69	76	59	64	73
	70	77	59	65	70
	69	78	60	64	72
	68	77	61	63	71
	68	77	61	63	72
	69	78	62	63	72
	70	77	56	63	71
	69	77	56	62	69
	67	75	57	60	68
	66	73	55	61	67
	65	71	52	59	66
	61	68	48	61	62
21/10/2014	58	64	46	56	59
	57	60	48	52	59
	55	58	50	55	59
	54	59	47	56	58
	54	60	47	55	57
	58	64	49	57	60
	62	65	55	58	60
	65	71	60	61	61
	67	71	62	62	61
	69	72	60	65	68
	70	74	64	64	70
	70	74	70	63	71
	69	75	76	63	72
	69	77	66	64	69
	69	77	73	64	71
	69	80	75	65	69
	68	80	60	65	71
	69	79	60	63	73
	68	78	58	62	69
	68	77	57	62	68
	67	76	57	61	66
	66	74	55	62	67

Date	GomtiNagar(S)	Hazratganj (C)	IndiraNagar(R)	PGI(S)	Talkatora(I)
	64	72	54	63	65
	65	71	50	61	62
22/10/2014	60	67	48	60	59
	58	64	48	55	61
	56	60	46	55	56
	59	60	47	57	55
	54	61	49	58	58
	59	64	48	61	63
	61	66	52	58	64
	65	66	54	60	62
	67	68	58	61	64
	69	71	60	64	70
	69	73	58	61	71
	69	73	56	62	71
	69	75	58	62	72
	68	76	54	62	69
	69	77	58	68	72
	68	77	59	62	73
	69	77	56	62	72
	68	77	59	61	69
	72	78	58	62	66
	68	78	57	62	65
	68	77	58	60	62
	65	74	57	62	61
	65	72	56	62	62
	62	70	53	62	59
23/10/2014	59	67	51	61	56
	57	63	48	60	58
	63	61	46	54	57
	59	62	45	54	58
	55	66	47	54	58
	59	70	49	56	58
	62	67	50	56	59
	64	65	55	62	60
	67	67	56	60	61
	65	68	61	60	63
	66	69	59	61	63
	67	70	56	61	63

Date	GomtiNagar(S)	Hazratganj (C)	IndiraNagar(R)	PGI(S)	Talkatora(I)
	68	72	56	60	63
	66	72	55	60	63
	65	73	55	59	65
	65	73	56	58	61
	65	73	55	64	61
	66	73	56	61	61
	71	73	56	62	62
	75	74	61	70	66
	72	73	80	74	78
	75	73	83	71	72
	74	74	77	71	70
	70	71	69	59	67
24/10/2014	62	68	66	54	61
	64	65	49	54	57
	56	63	46	56	56
	52	63	45	54	55
	53	64	43	54	56
	54	66	46	68	57
	60	65	54	56	60
	60	63	55	58	58
	64	65	54	60	58
	63	67	55	60	61
	64	68	53	74	60
	64	68	54	61	60
	65	69	52	64	59
	64	69	51	62	65
	64	70	52	60	58
	65	71	50	59	59
	64	71	51	59	60
	65	72	56	59	61
	66	74	62	64	63
	73	74	66	65	67
	69	74	73	65	67
	65	73	69	60	64
	63	71	64	60	59
	62	67	61	57	56
25/10/2014	58	66	51	55	54
	55	63	47	54	51

Date	GomtiNagar(S)	Hazratganj (C)	IndiraNagar(R)	PGI(S)	Talkatora(I)
	54	58	47	53	52
	53	58	44	56	51
	53	57	44	54	49
	57	61	46	55	55
	59	64	49	60	57
	62	65	53	61	57
	64	66	55	59	59
	65	69	54	61	60
	66	69	67	61	61
	67	70	60	60	60
	69	72	56	61	60
	70	73	53	64	59
	66	73	52	61	58
	65	73	54	59	58
	65	73	57	60	60
	68	74	60	60	62
	69	75	62	61	60
	66	78	62	61	61
	66	76	59	60	61
	66	75	58	57	61
	64	71	54	59	57
	62	69	53	57	60
26/10/2014	61	65	50	58	56
	55	62	47	61	53
	54	59	48	54	52
	52	59	46	55	50
	52	59	44	54	52
	58	62	45	54	51
	61	63	57	59	57
	62	66	60	59	61
	64	67	54	60	61
	64	69	56	58	59
	64	69	55	60	61
	65	70	53	59	61
	65	71	52	60	59
	67	71	58	59	59
	67	72	59	59	60
	66	73	51	58	60

Date	GomtiNagar(S)	Hazratganj (C)	IndiraNagar(R)	PGI(S)	Talkatora(I)
	66	75	52	59	59
	66	77	55	61	60
	65	77	57	59	58
	65	76	58	60	59
	65	75	57	63	58
	64	72	51	58	59
	63	70	51	58	57
	61	67	45	54	57
27/10/2014	59	63	43	57	56
	58	60	43	54	56
	52	59	41	52	56
	54	55	45	54	56
	57	59	41	55	56
	59	61	46	58	56
	64	66	53	60	59
	64	70	56	64	60
	69	70	58	62	61
	70	72	58	65	66
	69	73	64	65	73
	71	74	63	65	73
	70	74	57	66	73
	69	76	57	64	69
	71	75	53	65	72
	67	76	54	64	72
	69	78	54	62	71
	68	78	58	65	68
	68	77	54	63	66
	67	75	54	62	66
	66	74	53	62	66
	65	71	54	62	67
	64	69	56	58	65
	62	67	48	60	60
28/10/2014	57	63	48	59	58
	56	59	47	57	56
	56	59	45	57	56
	56	57	43	56	55
	54	57	44	57	56
	59	61	46	60	57

Date	GomtiNagar(S)	Hazratganj (C)	IndiraNagar(R)	PGI(S)	Talkatora(I)
	61	66	56	60	59
	66	70	58	61	60
	69	70	58	64	60
	70	71	57	64	67
	71	73	58	65	71
	71	73	59	65	69
	69	74	58	65	68
	70	75	57	65	67
	70	76	57	66	67
	67	75	56	66	68
	68	75	54	66	69
	69	77	55	67	68
	68	78	54	63	66
	67	77	57	60	66
	66	75	55	60	66
	64	72	55	60	65
	63	70	54	59	65
	60	67	53	55	58
29/10/2014	58	63	53	56	58
	56	58	51	52	58
	61	57	50	54	58
	55	58	50	52	56
	56	56	49	51	57
	59	61	62	53	58
	61	64	62	58	59
	65	71	70	61	60
	69	71	68	63	63
	69	72	62	63	67
	71	75	60	66	67
	70	74	59	66	69
	70	75	58	65	70
	69	76	58	65	68
	69	76	59	67	69
	68	78	56	65	70
	71	78	54	65	71
	68	78	57	65	71
	68	77	55	63	69
	68	76	54	64	67

Date	GomtiNagar(S)	Hazratganj (C)	IndiraNagar(R)	PGI(S)	Talkatora(I)
	67	76	53	63	66
	65	72	52	64	65
	63	69	49	65	65
	63	67	47	62	59
30/10/2014	60	63	46	58	57
	55	60	46	58	57
	56	60	44	59	58
	54	65	45	58	57
	57	64	46	62	59
	59	64	51	64	59
	62	65	60	61	61
	64	71	60	62	62
	69	71	61	63	63
	69	72	60	64	67
	70	73	61	65	68
	70	74	61	65	68
	70	75	57	64	70
	69	75	57	65	68
	69	77	58	66	70
	68	76	56	66	70
	67	77	59	67	70
	69	76	56	64	71
	69	76	56	61	68
	68	75	56	62	67
	68	73	56	59	67
	64	72	51	61	67
	64	69	49	59	67
	62	66	52	55	62

Table 4: Sound level data of Hyderabad on Hourly Basis

Date	Time	Abids (C)	Jeedimetla (I)	Jublee Hills (R)	Punjagutta (C)	Zoo (S)
15/10/2014	0:00	67	58	52	71	49
	1:00	65	57	50	70	48
	2:00	63	56	49	69	48
	3:00	64	56	49	68	47
	4:00	66	57	49	70	48
	5:00	69	57	49	74	55
	6:00	71	59	56	75	52
	7:00	72	61	57	75	54
	8:00	75	63	60	77	56
	9:00	76	66	59	79	58
	10:00	78	67	61	79	56
	11:00	78	67	63	79	55
	12:00	78	68	62	79	54
	13:00	78	66	61	78	57
	14:00	79	66	60	78	54
	15:00	79	66	59	78	56
	16:00	79	67	61	78	57
	17:00	79	67	63	79	54
	18:00	80	66	62	80	57
	19:00	80	66	60	79	56
	20:00	78	62	57	78	53
	21:00	78	60	56	76	52
	22:00	75	59	56	76	51
	23:00	72	58	54	74	50
16/10/2014	0:00	67	57	49	72	49
	1:00	65	56	48	70	48
	2:00	63	56	48	69	47
	3:00	62	56	47	67	47
	4:00	64	58	46	69	47
	5:00	68	58	49	73	55
	6:00	70	60	55	74	57
	7:00	72	62	57	75	53
	8:00	75	64	57	77	57
	9:00	76	65	59	79	56
	10:00	78	67	61	79	55
	11:00	78	69	63	79	55
	12:00	78	70	63	78	55
	13:00	79	66	61	78	57

Date	Time	Abids (C)	Jeedimetla (I)	Jublee Hills (R)	Punjagutta (C)	Zoo (S)
	14:00	79	66	60	78	55
	15:00	80	67	61	78	54
	16:00	79	67	61	79	58
	17:00	79	66	63	79	54
	18:00	80	65	61	80	57
	19:00	79	63	61	79	56
	20:00	78	62	59	78	53
	21:00	78	61	57	76	52
	22:00	76	60	57	76	51
	23:00	72	59	54	75	52
17/10/2014	0:00	69	59	51	73	49
	1:00	68	57	47	70	48
	2:00	65	58	47	71	48
	3:00	63	58	45	72	47
	4:00	64	57	46	70	48
	5:00	67	58	47	73	55
	6:00	70	61	55	75	53
	7:00	73	61	57	75	52
	8:00	75	62	58	77	54
	9:00	76	65	59	79	58
	10:00	78	67	62	79	57
	11:00	78	67	64	78	56
	12:00	78	68	64	78	58
	13:00	78	66	62	78	69
	14:00	79	68	61	78	58
	15:00	79	66	61	78	55
	16:00	79	67	61	78	58
	17:00	80	67	63	79	56
	18:00	79	66	62	80	60
	19:00	80	66	61	79	57
	20:00	78	62	59	78	54
	21:00	78	61	58	77	54
	22:00	76	60	58	77	54
	23:00	72	58	55	75	51
18/10/2014	0:00	76	57	51	73	50
	1:00	72	57	48	71	48
	2:00	63	56	47	70	47
	3:00	62	56	46	70	46

Date	Time	Abids (C)	Jeedimetla (I)	Jublee Hills (R)	Punjagutta (C)	Zoo (S)
	4:00	63	56	45	71	46
	5:00	66	56	47	74	54
	6:00	70	60	54	74	52
	7:00	72	60	57	75	52
	8:00	74	63	58	76	55
	9:00	76	67	59	78	57
	10:00	78	68	60	79	56
	11:00	78	68	62	78	56
	12:00	79	68	63	79	55
	13:00	78	65	59	79	58
	14:00	80	66	58	78	54
	15:00	80	67	60	78	56
	16:00	80	67	60	78	60
	17:00	80	67	62	79	55
	18:00	79	67	62	79	57
	19:00	80	65	60	79	55
	20:00	79	63	59	79	53
	21:00	78	62	58	77	52
	22:00	77	60	58	77	52
	23:00	73	59	56	75	53
19/10/2014	0:00	70	58	52	73	51
	1:00	69	57	50	71	48
	2:00	67	57	46	69	46
	3:00	66	57	45	68	46
	4:00	67	56	43	69	46
	5:00	69	56	48	72	55
	6:00	70	62	56	74	53
	7:00	73	64	56	74	51
	8:00	72	65	58	74	54
	9:00	74	66	59	75	57
	10:00	76	67	58	76	56
	11:00	76	68	60	77	55
	12:00	77	68	59	77	55
	13:00	77	66	58	77	56
	14:00	77	66	59	76	54
	15:00	78	66	58	77	56
	16:00	79	66	59	77	58
	17:00	79	67	60	77	56

Date	Time	Abids (C)	Jeedimetla (I)	Jublee Hills (R)	Punjagutta (C)	Zoo (S)
	18:00	81	67	60	77	56
	19:00	80	65	58	78	55
	20:00	79	65	57	78	54
	21:00	77	64	56	76	53
	22:00	75	64	56	75	52
	23:00	72	63	52	74	50
20/10/2014	0:00	68	63	49	71	48
	1:00	65	63	46	69	47
	2:00	64	63	46	68	47
	3:00	61	63	45	68	46
	4:00	63	63	44	69	47
	5:00	67	63	48	73	53
	6:00	70	65	53	74	52
	7:00	72	65	56	75	53
	8:00	75	63	58	77	55
	9:00	76	66	60	79	56
	10:00	78	67	62	79	56
	11:00	79	69	61	79	56
	12:00	79	69	62	79	54
	13:00	79	68	61	79	56
	14:00	80	66	61	79	54
	15:00	80	66	61	78	55
	16:00	80	67	61	79	56
	17:00	80	67	61	79	54
	18:00	79	67	61	80	56
	19:00	80	65	61	80	54
	20:00	79	65	58	79	53
	21:00	78	64	56	77	52
	22:00	77	63	58	77	52
	23:00	72	63	53	76	50
21/10/2014	0:00	70	64	50	72	49
	1:00	66	63	47	69	47
	2:00	64	63	46	69	46
	3:00	62	64	49	70	46
	4:00	65	63	47	71	47
	5:00	67	64	48	73	54
	6:00	70	61	55	74	52
	7:00	72	62	57	75	53

Date	Time	Abids (C)	Jeedimetla (I)	Jublee Hills (R)	Punjagutta (C)	Zoo (S)
	8:00	74	63	57	77	54
	9:00	76	66	59	78	58
	10:00	78	67	61	79	56
	11:00	78	68	61	79	55
	12:00	79	68	61	78	54
	13:00	79	67	59	79	55
	14:00	80	67	60	78	55
	15:00	80	67	60	78	55
	16:00	80	67	61	78	55
	17:00	80	68	62	79	55
	18:00	79	67	62	80	56
	19:00	79	66	61	80	55
	20:00	79	64	59	79	56
	21:00	78	62	57	78	57
	22:00	77	59	56	76	50
	23:00	73	57	54	75	51
22/10/2014	0:00	73	58	49	72	50
	1:00	72	57	46	70	47
	2:00	77	57	45	68	45
	3:00	76	56	43	68	45
	4:00	65	57	45	70	46
	5:00	67	57	48	72	52
	6:00	70	59	55	75	53
	7:00	72	61	58	75	54
	8:00	74	63	58	77	56
	9:00	75	66	59	78	58
	10:00	78	66	60	79	58
	11:00	78	70	61	79	55
	12:00	79	69	62	78	55
	13:00	79	66	60	79	55
	14:00	79	67	60	78	54
	15:00	80	67	60	79	56
	16:00	80	67	60	79	58
	17:00	81	67	62	79	56
	18:00	79	66	62	80	57
	19:00	79	65	64	80	57
	20:00	79	62	72	78	56
	21:00	79	61	69	78	55

Date	Time	Abids (C)	Jeedimetla (I)	Jublee Hills (R)	Punjagutta (C)	Zoo (S)
	22:00	78	59	64	77	54
	23:00	75	58	60	77	52
23/10/2014	0:00	72	58	52	73	49
	1:00	68	57	48	70	47
	2:00	66	57	45	68	46
	3:00	63	57	45	68	46
	4:00	65	56	45	69	47
	5:00	68	57	48	72	52
	6:00	70	59	55	74	51
	7:00	71	63	56	74	52
	8:00	71	63	56	74	55
	9:00	72	64	55	74	56
	10:00	75	64	56	76	56
	11:00	76	64	58	76	55
	12:00	77	64	56	76	52
	13:00	76	63	56	76	54
	14:00	77	61	55	76	55
	15:00	77	61	55	77	54
	16:00	77	62	56	76	56
	17:00	78	62	58	76	57
	18:00	78	65	63	78	59
	19:00	89	69	72	83	64
	20:00	93	69	75	86	67
	21:00	83	67	73	88	66
	22:00	83	64	72	82	66
	23:00	79	61	67	77	65
24/10/2014	0:00	76	59	62	76	62
	1:00	73	57	54	72	58
	2:00	70	57	50	71	52
	3:00	66	56	48	69	49
	4:00	65	58	46	70	46
	5:00	66	58	47	71	52
	6:00	69	61	52	73	52
	7:00	71	61	55	73	54
	8:00	73	63	57	75	56
	9:00	75	65	58	77	57
	10:00	77	66	60	78	57
	11:00	77	66	59	78	56

Date	Time	Abids (C)	Jeedimetla (I)	Jublee Hills (R)	Punjagutta (C)	Zoo (S)
	12:00	77	66	60	78	56
	13:00	77	66	60	77	60
	14:00	77	67	58	77	58
	15:00	77	65	58	77	57
	16:00	78	65	59	77	57
	17:00	78	66	61	79	57
	18:00	78	65	62	78	59
	19:00	78	63	64	79	62
	20:00	77	63	63	78	59
	21:00	76	63	62	76	59
	22:00	74	61	61	76	57
	23:00	70	59	55	74	55
25/10/2014	0:00	69	59	51	72	50
	1:00	65	58	48	70	48
	2:00	63	58	47	68	48
	3:00	61	58	46	69	48
	4:00	63	56	45	70	46
	5:00	67	57	48	73	53
	6:00	70	60	56	74	51
	7:00	72	60	58	75	54
	8:00	74	64	58	76	55
	9:00	75	67	58	78	58
	10:00	78	66	59	79	58
	11:00	78	67	59	79	57
	12:00	78	68	59	79	55
	13:00	79	67	59	80	59
	14:00	79	68	59	80	54
	15:00	79	67	59	80	57
	16:00	79	69	61	80	60
	17:00	79	68	60	81	56
	18:00	79	67	61	81	56
	19:00	79	63	60	80	55
	20:00	78	62	60	80	55
	21:00	77	62	58	79	52
	22:00	75	58	57	78	51
	23:00	71	58	53	76	50
26/10/2014	0:00	70	59	56	73	54
	1:00	68	60	56	71	49

Date	Time	Abids (C)	Jeedimetla (I)	Jublee Hills (R)	Punjagutta (C)	Zoo (S)
	2:00	64	56	56	69	47
	3:00	63	56	49	68	46
	4:00	64	56	46	70	47
	5:00	67	56	49	73	54
	6:00	70	58	53	75	53
	7:00	72	59	55	75	53
	8:00	73	62	57	77	55
	9:00	74	65	57	77	56
	10:00	75	66	57	78	57
	11:00	75	66	57	78	55
	12:00	76	66	58	78	56
	13:00	77	65	57	79	56
	14:00	77	63	57	78	55
	15:00	77	64	57	79	55
	16:00	78	65	57	79	57
	17:00	77	67	57	79	55
	18:00	78	65	57	79	56
	19:00	77	59	58	78	55
	20:00	77	58	59	77	53
	21:00	75	57	56	76	51
	22:00	73	56	54	75	49
	23:00	70	55	51	73	47
27/10/2014	0:00	67	55	46	70	46
	1:00	63	54	43	69	44
	2:00	59	54	46	67	44
	3:00	59	54	55	66	43
	4:00	63	55	51	69	42
	5:00	67	55	48	73	54
	6:00	70	59	52	76	49
	7:00	73	59	55	76	50
	8:00	75	61	56	78	53
	9:00	76	64	59	80	57
	10:00	78	63	61	80	55
	11:00	78	65	62	80	55
	12:00	79	66	60	79	53
	13:00	79	65	58	79	56
	14:00	79	64	59	79	53
	15:00	79	64	58	79	51

Date	Time	Abids (C)	Jeedimetla (I)	Jublee Hills (R)	Punjagutta (C)	Zoo (S)
	16:00	80	65	60	80	57
	17:00	79	64	60	80	53
	18:00	80	63	61	80	58
	19:00	79	63	61	80	57
	20:00	78	60	60	79	52
	21:00	78	60	58	77	52
	22:00	75	58	56	76	50
	23:00	71	56	55	74	50
28/10/2014	0:00	68	58	49	71	48
	1:00	77	55	46	69	47
	2:00	78	54	45	68	45
	3:00	73	55	45	68	44
	4:00	74	55	45	70	47
	5:00	71	56	50	72	55
	6:00	70	60	54	75	53
	7:00	73	61	56	76	53
	8:00	75	63	59	78	56
	9:00	76	67	59	79	56
	10:00	78	68	62	80	56
	11:00	79	69	61	79	54
	12:00	79	68	60	79	53
	13:00	79	67	60	79	56
	14:00	79	68	59	79	54
	15:00	79	68	59	79	53
	16:00	80	68	61	79	58
	17:00	79	68	62	80	55
	18:00	79	67	61	80	57
	19:00	79	65	60	79	56
	20:00	78	63	60	79	54
	21:00	77	62	57	77	53
	22:00	75	60	57	77	52
	23:00	71	59	54	74	51
29/10/2014	0:00	67	59	50	73	49
	1:00	64	58	48	69	47
	2:00	62	58	47	69	45
	3:00	60	57	48	70	46
	4:00	64	58	46	77	46
	5:00	66	58	51	77	58

Date	Time	Abids (C)	Jeedimetla (I)	Jublee Hills (R)	Punjagutta (C)	Zoo (S)
	6:00	70	61	55	75	54
	7:00	72	62	57	76	52
	8:00	75	64	58	78	55
	9:00	76	67	58	79	56
	10:00	79	68	60	80	55
	11:00	78	67	59	80	55
	12:00	78	67	60	80	53
	13:00	79	66	59	79	56
	14:00	78	66	59	79	53
	15:00	79	67	59	80	54
	16:00	79	66	60	80	58
	17:00	79	68	61	79	55
	18:00	79	67	60	81	57
	19:00	80	65	61	80	56
	20:00	78	64	60	79	54
	21:00	77	62	58	78	53
	22:00	75	62	57	79	52
	23:00	71	62	55	75	51
30/10/2014	0:00	68	60	52	73	50
	1:00	64	60	49	71	47
	2:00	61	59	47	67	47
	3:00	60	60	47	68	49
	4:00	64	60	48	71	48
	5:00	68	60	52	74	57
	6:00	70	62	56	76	59
	7:00	73	63	57	76	53
	8:00	75	64	57	78	56
	9:00	76	67	60	80	58
	10:00	78	68	61	79	59
	11:00	78	68	60	79	55
	12:00	78	67	60	79	55
	13:00	78	67	60	79	58
	14:00	78	67	61	78	57
	15:00	78	67	61	79	57
	16:00	79	68	62	79	58
	17:00	79	67	61	79	56
	18:00	79	67	61	81	57
	19:00	79	66	60	80	57

Date	Time	Abids (C)	Jeedimetla (I)	Jublee Hills (R)	Punjagutta (C)	Zoo (S)
	20:00	78	64	58	79	54
	21:00	78	63	57	78	53
	22:00	75	61	56	77	52
	23:00	71	61	55	75	51

Table 5: Sound level data of Bangalore on Hourly Basis

Date	Time	Nisarga Bhawan (R)	Parisar Bhawan (C)	BTM	Marathali(C)	Peeniya (I)
15/10/2014	0:00	51	59	57	58	60
	1:00	49	56	54	57	59
	2:00	50	53	55	56	59
	3:00	47	53	55	57	59
	4:00	47	52	55	57	59
	5:00	48	55	59	58	60
	6:00	50	59	64	59	57
	7:00	52	60	67	60	60
	8:00	53	64	67	61	60
	9:00	52	65	69	60	61
	10:00	61	67	68	61	59
	11:00	65	67	66	61	61
	12:00	66	68	66	60	60
	13:00	63	69	67	58	60
	14:00	61	69	66	59	60
	15:00	57	69	66	62	60
	16:00	58	69	67	62	61
	17:00	57	69	67	61	64
	18:00	60	68	68	61	64
	19:00	61	68	68	62	59
	20:00	62	66	67	61	58
	21:00	58	65	66	60	59
	22:00	53	64	66	60	59
	23:00	52	63	64	60	59
16/10/2014	0:00	52	60	58	58	58
	1:00	48	58	56	58	58
	2:00	48	55	54	57	58
	3:00	46	53	54	57	58
	4:00	47	55	54	57	58
	5:00	47	56	59	59	60
	6:00	51	59	63	60	56
	7:00	52	61	66	60	59
	8:00	54	65	67	61	59
	9:00	53	65	67	62	60
	10:00	55	67	67	62	60
	11:00	57	67	68	62	60

Date	Time	Nisarga Bhawan (R)	Parisar Bhawan (C)	BTM	Marathali(C)	Peeniya (I)
	12:00	57	69	66	60	59
	13:00	56	69	67	60	60
	14:00	55	68	66	60	60
	15:00	53	68	67	60	61
	16:00	54	68	68	61	61
	17:00	54	69	67	61	61
	18:00	60	68	68	60	61
	19:00	62	68	67	60	61
	20:00	62	66	67	60	60
	21:00	57	65	67	60	58
	22:00	51	64	65	60	58
	23:00	51	64	62	58	58
17/10/2014	0:00	51	60	59	57	59
	1:00	49	57	55	55	59
	2:00	48	54	55	54	59
	3:00	48	53	55	54	59
	4:00	47	52	55	54	60
	5:00	47	55	59	55	60
	6:00	52	59	64	58	57
	7:00	61	62	67	60	54
	8:00	54	64	67	60	55
	9:00	54	65	67	60	61
	10:00	54	68	67	61	64
	11:00	54	69	67	61	61
	12:00	53	69	67	61	60
	13:00	52	70	67	60	60
	14:00	54	70	67	59	60
	15:00	53	70	67	61	61
	16:00	54	70	69	62	65
	17:00	56	71	69	62	61
	18:00	58	71	68	61	61
	19:00	62	70	67	61	63
	20:00	60	69	67	60	62
	21:00	57	66	66	60	61
	22:00	51	65	65	60	59
	23:00	48	64	62	58	58
18/10/201	0:00	48	63	59	56	59

Date	Time	Nisarga Bhawan (R)	Parisar Bhawan (C)	BTM	Marathali(C)	Peeniya (I)
4	1:00	48	62	56	56	58
	2:00	49	58	53	55	58
	3:00	47	54	53	55	58
	4:00	48	55	54	55	59
	5:00	51	54	58	56	60
	6:00	51	59	63	57	56
	7:00	55	61	65	58	56
	8:00	54	63	66	59	57
	9:00	55	65	67	59	62
	10:00	55	66	67	60	61
	11:00	53	67	66	61	59
	12:00	54	69	67	61	60
	13:00	56	70	68	63	61
	14:00	58	70	68	61	59
	15:00	54	71	67	60	60
	16:00	53	69	66	61	59
	17:00	55	70	69	61	62
	18:00	55	69	67	62	61
	19:00	62	69	66	61	62
	20:00	60	69	66	61	61
	21:00	58	69	64	60	61
	22:00	50	66	63	59	61
	23:00	51	65	60	58	62
19/10/2014	0:00	56	63	55	56	62
	1:00	52	63	54	55	61
	2:00	50	58	52	54	60
	3:00	51	56	51	54	59
	4:00	49	54	52	53	59
	5:00	49	55	57	56	60
	6:00	52	58	60	57	56
	7:00	53	59	63	57	58
	8:00	54	61	64	59	58
	9:00	54	62	65	59	56
	10:00	55	63	65	59	55
	11:00	53	64	65	59	55
	12:00	57	64	66	61	58
	13:00	55	65	68	59	59

Date	Time	Nisarga Bhawan (R)	Parisar Bhawan (C)	BTM	Marathali(C)	Peeniya (I)
	14:00	54	66	66	59	55
	15:00	54	66	66	59	55
	16:00	57	66	67	59	56
	17:00	60	65	66	59	58
	18:00	62	65	66	62	63
	19:00	60	67	64	61	64
	20:00	62	66	64	59	63
	21:00	59	65	63	58	62
	22:00	51	65	61	58	62
	23:00	51	63	59	58	60
20/10/2014	0:00	48	59	54	58	62
	1:00	48	54	51	57	61
	2:00	48	52	50	57	59
	3:00	49	52	48	57	58
	4:00	50	52	50	58	59
	5:00	49	54	58	59	57
	6:00	50	58	63	60	56
	7:00	53	61	66	60	60
	8:00	54	65	67	61	60
	9:00	55	65	68	63	61
	10:00	58	66	68	63	60
	11:00	55	67	67	62	60
	12:00	55	68	67	62	62
	13:00	55	69	67	62	61
	14:00	56	69	66	62	59
	15:00	55	69	67	63	59
	16:00	56	69	67	63	60
	17:00	57	69	68	62	62
	18:00	57	70	68	62	63
	19:00	60	68	67	61	63
	20:00	62	65	67	62	62
	21:00	53	65	66	61	60
	22:00	52	63	65	59	59
	23:00	50	62	62	60	59
21/10/2014	0:00	49	59	57	59	58
	1:00	49	55	55	57	58
	2:00	48	53	53	57	58

Date	Time	Nisarga Bhawan (R)	Parisar Bhawan (C)	BTM	Marathali(C)	Peeniya (I)
	3:00	48	54	54	57	58
	4:00	50	53	54	59	58
	5:00	50	55	59	59	59
	6:00	52	58	63	60	57
	7:00	55	61	66	61	57
	8:00	54	65	67	62	61
	9:00	54	65	68	62	61
	10:00	54	67	67	62	59
	11:00	55	68	67	63	60
	12:00	57	68	67	63	61
	13:00	55	69	67	63	61
	14:00	58	70	66	62	60
	15:00	55	71	66	62	62
	16:00	55	71	67	62	61
	17:00	56	71	68	62	59
	18:00	61	70	68	62	58
	19:00	61	68	68	62	62
	20:00	62	67	67	62	61
	21:00	54	65	66	60	60
	22:00	53	64	65	60	60
	23:00	49	63	62	58	60
22/10/2014	0:00	47	59	58	58	61
	1:00	47	55	55	58	61
	2:00	46	54	54	58	60
	3:00	47	54	54	58	59
	4:00	48	54	55	58	60
	5:00	47	57	59	58	60
	6:00	51	58	64	60	56
	7:00	54	60	67	61	60
	8:00	56	61	67	62	60
	9:00	58	63	67	62	61
	10:00	58	64	67	62	59
	11:00	59	64	67	62	57
	12:00	59	65	66	62	57
	13:00	58	65	66	61	56
	14:00	56	66	66	61	56
	15:00	56	65	66	60	56

Date	Time	Nisarga Bhawan (R)	Parisar Bhawan (C)	BTM	Marathali(C)	Peeniya (I)
	16:00	56	65	67	63	58
	17:00	60	66	70	63	64
	18:00	57	66	69	62	61
	19:00	61	65	68	63	61
	20:00	60	67	69	61	60
	21:00	60	65	67	61	60
	22:00	59	63	68	61	61
	23:00	49	62	61	59	59
23/10/2014	0:00	48	59	57	58	60
	1:00	47	58	55	57	60
	2:00	46	55	53	57	60
	3:00	46	53	53	57	60
	4:00	46	53	53	58	60
	5:00	48	54	57	58	62
	6:00	51	57	63	59	57
	7:00	55	61	65	62	56
	8:00	57	61	65	62	60
	9:00	59	63	66	60	61
	10:00	61	65	67	61	61
	11:00	62	67	67	61	60
	12:00	61	66	66	61	59
	13:00	63	68	66	58	61
	14:00	60	67	66	59	59
	15:00	61	69	67	61	58
	16:00	62	67	69	62	61
	17:00	57	68	68	63	60
	18:00	63	71	71	66	60
	19:00	75	75	73	71	65
	20:00	73	70	74	70	65
	21:00	73	65	73	67	64
	22:00	68	67	71	65	64
	23:00	59	63	64	62	63
24/10/2014	0:00	50	62	58	59	62
	1:00	46	55	55	57	62
	2:00	45	52	53	57	61
	3:00	45	52	53	57	61
	4:00	46	52	54	57	61

Date	Time	Nisarga Bhawan (R)	Parisar Bhawan (C)	BTM	Marathali(C)	Peeniya (I)
	5:00	48	52	58	57	61
	6:00	51	57	61	58	57
	7:00	53	59	64	59	55
	8:00	56	61	65	60	60
	9:00	56	62	67	60	59
	10:00	58	64	66	60	61
	11:00	59	64	66	61	61
	12:00	62	65	66	60	61
	13:00	61	65	67	61	61
	14:00	61	65	65	60	61
	15:00	60	65	65	62	61
	16:00	60	65	67	60	61
	17:00	67	66	67	60	62
	18:00	73	67	68	62	66
	19:00	76	66	70	65	68
	20:00	75	67	71	64	66
	21:00	74	66	66	62	65
	22:00	67	65	65	60	64
	23:00	67	63	62	58	63
25/10/2014	0:00	57	62	56	58	61
	1:00	53	60	55	59	62
	2:00	51	53	53	58	61
	3:00	51	52	53	58	61
	4:00	47	52	54	58	60
	5:00	48	53	58	58	61
	6:00	50	59	62	59	57
	7:00	51	60	64	60	60
	8:00	53	61	65	60	60
	9:00	53	64	66	59	60
	10:00	55	65	66	61	61
	11:00	55	66	66	60	61
	12:00	55	67	67	60	60
	13:00	54	68	67	59	61
	14:00	55	69	66	60	60
	15:00	55	67	67	61	63
	16:00	66	69	72	61	65
	17:00	66	70	71	62	64

Date	Time	Nisarga Bhawan (R)	Parisar Bhawan (C)	BTM	Marathali(C)	Peeniya (I)
	18:00	54	67	68	60	61
	19:00	58	65	66	61	62
	20:00	55	65	65	62	62
	21:00	53	65	63	60	60
	22:00	50	64	61	59	60
	23:00	47	63	59	59	61
26/10/2014	0:00	46	61	54	58	62
	1:00	47	60	52	58	60
	2:00	46	56	50	59	60
	3:00	46	54	51	59	60
	4:00	46	53	58	59	60
	5:00	50	54	56	57	60
	6:00	56	57	60	57	56
	7:00	61	60	63	59	59
	8:00	52	59	64	61	56
	9:00	53	61	66	58	53
	10:00	54	62	65	57	51
	11:00	54	63	66	57	58
	12:00	54	64	66	56	56
	13:00	55	64	65	55	55
	14:00	53	66	65	55	54
	15:00	54	65	66	56	56
	16:00	54	67	66	58	55
	17:00	58	67	66	58	58
	18:00	64	64	66	62	59
	19:00	63	65	65	62	62
	20:00	62	65	64	62	62
	21:00	64	65	63	61	62
	22:00	51	64	62	60	61
	23:00	48	63	58	60	61
27/10/2014	0:00	48	58	55	59	59
	1:00	49	55	51	59	58
	2:00	46	53	50	58	57
	3:00	57	50	53	58	68
	4:00	59	56	52	58	63
	5:00	49	56	57	58	59
	6:00	50	58	62	59	57

Date	Time	Nisarga Bhawan (R)	Parisar Bhawan (C)	BTM	Marathali(C)	Peeniya (I)
	7:00	51	61	67	60	59
	8:00	54	65	67	60	59
	9:00	54	65	68	60	60
	10:00	53	67	67	60	60
	11:00	55	67	67	59	61
	12:00	54	68	67	60	60
	13:00	55	68	67	59	60
	14:00	53	69	66	59	61
	15:00	51	69	66	60	60
	16:00	52	69	68	60	61
	17:00	56	69	67	60	62
	18:00	59	69	68	62	60
	19:00	52	69	67	64	62
	20:00	55	67	67	63	58
	21:00	53	66	67	64	58
	22:00	56	66	69	62	58
	23:00	53	65	65	61	58
28/10/2014	0:00	48	59	58	59	60
	1:00	46	55	56	58	60
	2:00	47	53	55	59	61
	3:00	47	54	54	60	62
	4:00	48	54	54	61	62
	5:00	47	54	58	61	61
	6:00	52	58	63	61	58
	7:00	54	60	66	61	58
	8:00	53	64	68	61	59
	9:00	54	65	68	60	61
	10:00	53	67	67	61	61
	11:00	53	67	66	62	61
	12:00	55	68	66	60	62
	13:00	54	69	66	60	60
	14:00	57	68	66	61	61
	15:00	57	69	69	61	61
	16:00	55	68	70	61	61
	17:00	55	68	67	61	61
	18:00	54	69	67	62	62
	19:00	54	68	67	61	64

Date	Time	Nisarga Bhawan (R)	Parisar Bhawan (C)	BTM	Marathali(C)	Peeniya (I)
	20:00	53	66	66	63	61
	21:00	52	65	65	64	61
	22:00	50	64	64	64	61
	23:00	49	62	61	62	62
29/10/2014	0:00	47	58	57	62	62
	1:00	47	57	55	58	62
	2:00	46	52	54	58	61
	3:00	46	51	60	58	60
	4:00	46	52	55	58	59
	5:00	47	53	58	59	59
	6:00	51	58	63	60	56
	7:00	53	61	66	59	55
	8:00	54	65	67	60	59
	9:00	55	65	68	60	60
	10:00	53	68	67	60	60
	11:00	55	68	66	61	60
	12:00	55	69	67	60	60
	13:00	53	69	66	56	59
	14:00	53	69	65	60	60
	15:00	55	71	66	59	60
	16:00	54	69	67	60	62
	17:00	55	70	68	61	60
	18:00	53	70	68	61	60
	19:00	53	67	67	60	63
	20:00	52	66	67	62	63
	21:00	52	65	66	62	62
	22:00	51	64	65	61	62
	23:00	53	63	62	60	63
30/10/2014	0:00	52	59	58	60	61
	1:00	50	57	55	59	60
	2:00	45	56	52	58	59
	3:00	44	55	54	58	59
	4:00	43	56	53	58	59
	5:00	45	56	59	57	60
	6:00	51	59	63	60	56
	7:00	55	61	67	61	56
	8:00	54	64	67	61	60

Date	Time	Nisarga Bhawan (R)	Parisar Bhawan (C)	BTM	Marathali(C)	Peeniya (I)
	9:00	55	65	67	61	60
	10:00	55	67	67	61	61
	11:00	57	67	66	60	60
	12:00	55	68	66	61	60
	13:00	55	69	67	59	57
	14:00	52	68	66	61	60
	15:00	56	69	67	61	61
	16:00	54	69	67	60	60
	17:00	54	69	67	61	60
	18:00	52	69	67	61	56
	19:00	51	67	67	61	59
	20:00	51	66	67	60	63
	21:00	50	64	65	59	61
	22:00	47	64	64	59	60
	23:00	50	63	62	59	59

Table 6: Sound level data of Chennai on Hourly Basis

Date	Time	Eye Hosp	Guindy	Preambur	Tnagar	Triplicane
15/10/2014	0:00	55	76	57	65	57
	1:00	51	74	55	65	54
	2:00	58	73	54	60	53
	3:00	59	73	55	61	51
	4:00	58	74	58	62	58
	5:00	62	76	65	66	64
	6:00	65	79	68	73	68
	7:00	71	80	70	73	69
	8:00	36	81	72	75	71
	9:00	53	81	73	76	72
	10:00	45	80	72	76	71
	11:00		80	72	76	71
	12:00	32	81	72	77	71
	13:00	55	80	72	76	71
	14:00	32	80	71	76	72
	15:00	62	80	72	76	71
	16:00	59	80	72	77	72
	17:00	65	80	72	77	72
	18:00	68	80	72	77	72
	19:00	66	80	71	77	70
	20:00	66	80	71	76	71
	21:00	66	79	71	74	69
	22:00	61	79	68	72	67
	23:00	58	77	64	68	63
16/10/2014	0:00	57	75	59	64	57
	1:00	57	74	56	63	58
	2:00	48	73	53	62	54
	3:00	56	74	53	62	54
	4:00	53	74	59	63	57
	5:00	59	76	64	66	63
	6:00	65	79	69	73	69
	7:00	67	79	70	73	70
	8:00	52	80	72	75	71
	9:00		81	72	75	72
	10:00		81	72	77	71
	11:00		80	71	76	71
	12:00		80	72	77	72
	13:00		80	72	76	72

Date	Time	Eye Hosp	Guindy	Preambur	Tnagar	Triplicane
	14:00		80	71	76	71
	15:00		80	71	75	72
	16:00	58	80	71	76	72
	17:00	61	81	72	76	72
	18:00	68	80	72	77	72
	19:00	67	80	71	77	71
	20:00	68	80	71	75	71
	21:00	65	79	71	75	70
	22:00	64	79	68	72	68
	23:00	61	77	63	68	64
17/10/2014	0:00	60	76	57	65	62
	1:00	61	75	53	63	58
	2:00	52	73	52	61	57
	3:00	55	73	56	62	61
	4:00	59	75	59	63	60
	5:00	61	76	66	67	64
	6:00	66	79	69	73	69
	7:00	71	79	70	75	71
	8:00	55	80	72	75	72
	9:00	62	81	72	76	72
	10:00	54	81	72	76	72
	11:00	69	81	71	76	72
	12:00	71	81	73	79	74
	13:00	72	81	83	78	71
	14:00	74	82	73	78	74
	15:00	73	81	73	80	74
	16:00	71	81	72	80	72
	17:00	70	81	72	79	72
	18:00	70	83	72	79	70
	19:00	67	82	72	79	70
	20:00	66	82	71	78	69
	21:00	69	82	71	74	68
	22:00	64	80	68	72	64
	23:00	56	78	63	68	61
18/10/2014	0:00	60	76	58	65	55
	1:00	53	74	53	61	54
	2:00	51	73	51	61	51
	3:00	65	73	58	62	63
	4:00	78	87	62	66	62

Date	Time	Eye Hosp	Guindy	Preambur	Tnagar	Triplicane
	5:00	81		68	80	72
	6:00	74		73	74	72
	7:00	70	75	69	75	73
	8:00	67	78	70	75	82
	9:00	69	81	72	75	71
	10:00	68	81	73	76	69
	11:00	70	80	73	77	56
	12:00	74	80	73	77	57
	13:00	69	81	72	78	57
	14:00	69	81	72	78	55
	15:00	73	81	72	79	54
	16:00	72	80	71	78	41
	17:00	71	79	72	77	42
	18:00	66	82	73	77	44
	19:00	66	81	72	77	45
	20:00	74	80	71	76	45
	21:00	68	79	71	74	42
	22:00	77	78	69	73	40
	23:00	69	83	66	68	40
19/10/2014	0:00	55		58	64	38
	1:00	59		56	62	34
	2:00	62		59	62	34
	3:00	60		57	61	34
	4:00	57		59	62	35
	5:00	62		64	66	38
	6:00	65		69	70	40
	7:00	69		69	72	41
	8:00	69		70	73	44
	9:00	68		71	73	45
	10:00	70	76	72	75	46
	11:00	67	90	80	76	46
	12:00	67	80	74	77	47
	13:00	68	79	73	76	48
	14:00	69	79	72	77	49
	15:00	73	79	72	77	49
	16:00	68	81	72	77	50
	17:00	70	100	72	76	51
	18:00	78		74	76	50
	19:00	69		72	76	50

Date	Time	Eye Hosp	Guindy	Preambur	Tnagar	Triplicane
	20:00	66		71	75	50
	21:00	65		70	74	49
	22:00	69		69	72	49
	23:00	59		63	67	42
20/10/2014	0:00	57		57	62	40
	1:00	63		60	62	41
	2:00	66		61	61	44
	3:00	67		64	62	44
	4:00	62		62	62	44
	5:00	61		65	65	45
	6:00	68		68	72	49
	7:00	67		70	74	52
	8:00	70	79	71	76	54
	9:00	71		74	78	57
	10:00	71		73	79	57
	11:00	76		74	80	58
	12:00	70		74	79	58
	13:00	70		73	80	58
	14:00	72	95	71	79	61
	15:00	70	85	71	80	64
	16:00	74		73	80	64
	17:00	70		73	81	67
	18:00	69		73	81	64
	19:00	69		72	79	63
	20:00	69		72	79	63
	21:00	69		72	76	62
	22:00	66		70	74	60
	23:00	62		66	70	55
21/10/2014	0:00	64		59	65	51
	1:00	58		57	63	52
	2:00	50		54	61	49
	3:00	55		56	61	49
	4:00	63		58	65	55
	5:00	62		64	66	56
	6:00	68		68	70	61
	7:00	71	83	70	74	67
	8:00	69	80	72	74	69
	9:00	67	81	73	76	69
	10:00	69	81	72	77	70

Date	Time	Eye Hosp	Guindy	Preambur	Tnagar	Triplicane
	11:00	69	80	72	76	70
	12:00	72	80	72	77	69
	13:00	71	80	72	77	69
	14:00	70	80	72	77	68
	15:00	76	80	72	76	68
	16:00	71	80	73	78	69
	17:00	69	80	73	77	72
	18:00	75	80	74	79	72
	19:00	73	80	74	78	72
	20:00	75	80	74	79	72
	21:00	73	79	74	77	71
	22:00	71	78	72	75	70
	23:00	73	76	69	73	63
22/10/2014	0:00	72	74	62	66	59
	1:00	55	72	57	63	57
	2:00	52	70	55	61	55
	3:00	57	72	56	61	54
	4:00	59	73	59	63	56
	5:00	63	74	67	66	68
	6:00	66	76	70	72	74
	7:00	70	76	70	72	75
	8:00	76	76	73	72	75
	9:00	73	77	74	78	75
	10:00	77	77	76	74	75
	11:00	83	78	76	75	78
	12:00	78	78	76	74	76
	13:00	72	78	75	74	73
	14:00	72	77	74	74	74
	15:00	82	77	76	76	76
	16:00	77	77	77	75	77
	17:00	80	77	80	75	76
	18:00	85	78	83	78	83
	19:00	91	79	86	81	85
	20:00	89	78	83	82	83
	21:00	84	77	78	79	74
	22:00	73	75	73	77	72
	23:00	68	73	64	71	61
23/10/2014	0:00	63	70	60	62	56
	1:00	52	70	59	61	51

Date	Time	Eye Hosp	Guindy	Preambur	Tnagar	Triplicane
	2:00	51	67	58	62	49
	3:00	47	69	55	60	51
	4:00	51	71	57	64	52
	5:00	58	74	66	65	61
	6:00	65	76	68	70	65
	7:00	69	77	70	71	67
	8:00	69	79	71	73	69
	9:00	67	80	71	75	71
	10:00	71	80	72	76	69
	11:00	70	79	75	75	72
	12:00	68	79	74	75	70
	13:00	70	79	72	75	70
	14:00	72	79	74	75	70
	15:00	72	79	76	75	70
	16:00	71	79	72	76	70
	17:00	74	79	72	77	71
	18:00	75	79	76	76	73
	19:00	79	79	78	77	76
	20:00	75	78	78	79	76
	21:00	79	78	75	77	72
	22:00	74	76	71	74	70
	23:00	64	75	62	74	60
24/10/2014	0:00	57	73	56	73	54
	1:00	51	71	59	72	53
	2:00	54	70	54	73	52
	3:00	71	75	53	68	57
	4:00	78	74	71	69	69
	5:00	60	80	66	74	63
	6:00	72		70	73	69
	7:00	70		70	74	69
	8:00	69		70	74	68
	9:00	68	93	70	75	69
	10:00	69	81	71	76	71
	11:00	69	80	72	76	70
	12:00	70	80	72	76	71
	13:00	69	80	72	76	69
	14:00	69	79	72	75	69
	15:00	81	79	72	76	70
	16:00	74	79	71	75	70

Date	Time	Eye Hosp	Guindy	Preambur	Tnagar	Triplicane
	17:00	70	79	72	75	71
	18:00	68	79	73	76	70
	19:00	73	79	74	76	69
	20:00	76	79	72	77	69
	21:00	68	78	72	74	69
	22:00	60	77	71	71	65
	23:00	61	76	63	67	58
25/10/2014	0:00	58	73	56	62	53
	1:00	54	72	59	62	51
	2:00	55	75	54	60	48
	3:00	53		54	59	50
	4:00	61		57	63	53
	5:00	61		65	65	60
	6:00	65		67	69	67
	7:00	71	82	69	73	67
	8:00	70	79	70	73	69
	9:00	67	80	72	74	70
	10:00	68	80	72	75	70
	11:00	67	80	72	76	70
	12:00	67	80	73	76	70
	13:00	69	80	72	76	70
	14:00	69	79	72	76	69
	15:00	67	80	72	76	69
	16:00	68	80	73	76	70
	17:00	68	80	72	76	71
	18:00	68	80	73	76	70
	19:00	68	79	72	75	71
	20:00	70	78	72	75	70
	21:00	70	78	71	75	69
	22:00	64	77	69	71	66
	23:00	61	75	64	66	61
26/10/2014	0:00	53	74	57	63	57
	1:00	51	72	58	60	52
	2:00	52	72	54	61	51
	3:00	47	71	52	59	50
	4:00	56	73	58	63	52
	5:00	60	75	66	65	61
	6:00	65	77	67	70	66
	7:00	65	78	68	72	67

Date	Time	Eye Hosp	Guindy	Preambur	Tnagar	Triplicane
	8:00	66	79	69	71	68
	9:00	67	79	71	74	69
	10:00	67	79	72	73	69
	11:00	67	80	75	74	69
	12:00	65	79	73	75	70
	13:00	65	79	72	74	70
	14:00	65	79	71	74	70
	15:00	69	79	72	74	70
	16:00	68	79	72	74	70
	17:00	69	79	73	74	71
	18:00	79	78	75	74	70
	19:00	87	78	72	73	70
	20:00	78	78	71	73	69
	21:00	66	77	70	73	68
	22:00	62	77	68	69	65
	23:00	56	75	61	64	59
27/10/2014	0:00	54	73	56	60	53
	1:00	52	72	58	58	52
	2:00	52	70	55	59	47
	3:00	52	71	51	58	49
	4:00	55	73	56	61	52
	5:00	57	75	64	66	61
	6:00	65	78	69	72	67
	7:00	68	79	70	74	69
	8:00	69	80	73	75	71
	9:00	67	81	73	76	71
	10:00	68	81	72	75	71
	11:00	69	80	72	76	73
	12:00	68	80	72	76	71
	13:00	69	80	72	76	71
	14:00	67	79	71	75	70
	15:00	70	80	71	76	71
	16:00	66	79	72	76	72
	17:00	69	80	72	76	71
	18:00	68	80	73	76	70
	19:00	66	80	72	76	69
	20:00	67	79	72	75	70
	21:00	65	78	71	75	68
	22:00	61	78	69	72	66

Date	Time	Eye Hosp	Guindy	Preambur	Tnagar	Triplicane
	23:00	56	76	63	67	60
28/10/2014	0:00	63	75	58	64	56
	1:00	53	73	57	62	52
	2:00	50	72	52	63	53
	3:00	53	72	52	60	51
	4:00	55	74	59	63	54
	5:00	61	76	65	65	62
	6:00	66	78	68	72	68
	7:00	69	79	70	74	70
	8:00	70	80	72	75	72
	9:00	64	81	72	75	72
	10:00	64	80	71	75	72
	11:00	61	80	71	75	71
	12:00	63	79	71	75	71
	13:00	65	79	71	76	71
	14:00	68	79	71	75	71
	15:00	66	79	71	75	72
	16:00	64	80	71	76	72
	17:00	65	80	72	77	73
	18:00	65	80	72	77	71
	19:00	67	79	71	76	71
	20:00	65	79	71	75	71
	21:00	66	79	71	75	71
	22:00	64	78	69	73	69
	23:00	56	77	63	67	62
29/10/2014	0:00	53	75	58	63	56
	1:00	51	73	60	62	54
	2:00	50	73	60	60	53
	3:00	53	72	59	60	51
	4:00	62	74	59	63	58
	5:00	63	75	64	66	65
	6:00	67	78	69	72	67
	7:00	69	79	71	73	69
	8:00	69	80	72	75	70
	9:00	66	81	72	76	71
	10:00	66	80	71	76	71
	11:00	62	80	72	76	71
	12:00	63	80	72	76	71
	13:00	65	80	72	75	71

Date	Time	Eye Hosp	Guindy	Preambur	Tnagar	Triplicane
	14:00	65	79	71	75	72
	15:00	68	79	72	75	72
	16:00	75	80	72	76	72
	17:00	68	80	72	76	72
	18:00	67	79	72	77	72
	19:00	67	80	72	76	71
	20:00	68	79	71	74	71
	21:00	65	79	71	75	72
	22:00	63	79	69	72	70
	23:00	57	77	64	67	65
30/10/2014	0:00	57	75	62	65	60
	1:00	51	74	57	62	60
	2:00	54	72	56	62	59
	3:00	52	72	57	60	56
	4:00	52	74	60	63	56
	5:00	63	76	66	66	63
	6:00	66	78	68	72	68
	7:00	68	79	70	75	69
	8:00	69	80	72	75	71
	9:00	66	81	72	75	72
	10:00	67	81	72	76	73
	11:00	67	80	72	75	72
	12:00	68	80	71	76	73
	13:00	67	81	72	76	72
	14:00	66	79	71	75	72
	15:00	68	80	71	76	72
	16:00	77	79	71	76	72
	17:00	69	79	72	76	72
	18:00	66	80	72	77	71
	19:00	65	80	72	76	71
	20:00	66	79	71	76	70
	21:00	63	79	71	75	70
	22:00	61	79	69	72	68
	23:00	58	77	64	68	64

Table 7: Sound level data of Kolkata on Hourly Basis

Date	Time	GolePark(I)	KolkataHQ (C)	NewMarket(C)	Patauli(R)	SSKMHospital(S)
15/10/2014	0:00	70	56	72	49	55
	1:00	70	53	72	47	54
	2:00	68	52	72	46	53
	3:00	70	52	73	47	55
	4:00	70	55	72	51	55
	5:00	71	59	73	54	57
	6:00	71	59	72	51	59
	7:00	71	61	75	55	58
	8:00	70	62	75	56	61
	9:00	73	64	75	57	63
	10:00	72	65	74	55	65
	11:00	100	66	74	53	65
	12:00	73	91	74	54	64
	13:00	72	93	74	56	64
	14:00	71	66	75	96	65
	15:00	72	66	74	66	66
	16:00	73	66	77	57	62
	17:00	73	65	75	58	63
	18:00	72	63	76	53	62
	19:00	72	62	73	54	62
	20:00	70	61	71	53	60
	21:00	71	61	72	54	59
	22:00	71	60	73	52	58
	23:00	70	59	72	51	56
16/10/2014	0:00	72	55	73	48	56
	1:00	70	53	74	47	58
	2:00	68	53	72	47	53
	3:00	70	51	72	51	52
	4:00	71	55	71	51	55
	5:00	71	59	72	53	57
	6:00	71	59	69	65	59
	7:00	70	61	72	57	60
	8:00	71	62	74	55	61
	9:00	72	64	75	54	62
	10:00	72	65	79	54	64
	11:00	76	66	76	54	64
	12:00	76	66	74	53	65
	13:00	76	65	76	53	64

Date	Time	GolePark(I)	KolkataHQ (C)	NewMarket(C)	Patauli(R)	SSKMHospital(S)
	14:00	74	65	75	53	64
	15:00	75	66	79	96	64
	16:00	74	65	77	96	64
	17:00	73	66	74		63
	18:00	72	63	74		62
	19:00	72	62	73		61
	20:00	73	61	74		59
	21:00	73	61	74	53	58
	22:00	72	60	75	52	57
	23:00	72	58	73	53	56
17/10/2014	0:00	72	55	72	50	54
	1:00	70	55	72	47	55
	2:00	71	57	71	47	56
	3:00	72	57	71	48	54
	4:00	73	57	71	51	54
	5:00	72	59	73	53	57
	6:00	70	60	71	53	60
	7:00	71	62	72	77	61
	8:00	70	63	73	54	61
	9:00	72	64	71	54	62
	10:00	72	66	72	56	64
	11:00	76	66	72	54	64
	12:00	76	66	73	53	64
	13:00	76	66	74	55	64
	14:00	75	66	75	54	64
	15:00	73	65	76	65	63
	16:00	73	65	73	98	63
	17:00	73	65	83		62
	18:00	72	65	78		60
	19:00	72	62	76		60
	20:00	71	62	76	53	59
	21:00	71	61	75	54	61
	22:00	72	61	73	52	59
	23:00	72	59	71	50	56
18/10/2014	0:00	71	57	74	48	55
	1:00	71	54	72	47	55
	2:00	75	57	70	47	54
	3:00	70	54	72	49	55
	4:00	70	57	71	51	54

Date	Time	GolePark(I)	KolkataHQ (C)	NewMarket(C)	Patauli(R)	SSKMHospital(S)
	5:00	71	58	74	55	57
	6:00	71	59	77		60
	7:00	71	61	74		61
	8:00	70	63	77	61	60
	9:00	71	63	79	54	62
	10:00	72	63	77	55	63
	11:00	74	63	78	55	64
	12:00	76	63	81	55	65
	13:00	76	63	82	55	63
	14:00	74	62	84	57	63
	15:00	73	62	76	98	62
	16:00	70	62	78		61
	17:00	73	63	81	58	60
	18:00	72	62	78	53	59
	19:00	72	62	75	53	61
	20:00	71	61	76	55	58
	21:00	72	61	76	53	59
	22:00	71	61	72	53	58
	23:00	72	59	71	50	58
19/10/2014	0:00	71	57	78	48	56
	1:00	70	56	76	46	54
	2:00	71	54	74	49	54
	3:00	71	55	74	47	54
	4:00	71	56	73	50	54
	5:00	71	58	73	52	57
	6:00	71	59	74	50	58
	7:00	71	61	73	52	60
	8:00	72	61	73	53	58
	9:00	72	61	70	52	58
	10:00	72	61	70	53	58
	11:00	72	62	71	53	60
	12:00	73	62	76	54	61
	13:00	72	62	76	53	60
	14:00	75	63	73	54	61
	15:00	76	64	79	54	60
	16:00	72	64	75	54	61
	17:00	73	62	77	56	64
	18:00	72	63	77	53	59
	19:00	72	65	75	54	58

Date	Time	GolePark(I)	KolkataHQ (C)	NewMarket(C)	Patauli(R)	SSKMHospital(S)
	20:00	72	61	73	54	59
	21:00	71	61	77	54	57
	22:00	72	61	72	53	58
	23:00	72	59	73	52	56
20/10/2014	0:00	71	56	73	47	54
	1:00	71	54	74	49	53
	2:00	72	52	72	45	52
	3:00	69	52	73	46	52
	4:00	70	55	71	50	53
	5:00	71	58	72	54	58
	6:00	71	59	72	52	60
	7:00	70	61	74	53	59
	8:00	73	62	74	57	61
	9:00	71	64	75	55	62
	10:00	74	65	77	55	64
	11:00	78	66	74	55	65
	12:00	76	65	73	55	66
	13:00	76	66	77	56	65
	14:00	76	65	75	56	64
	15:00	73	66	74	55	63
	16:00	75	66	75	57	63
	17:00	75	65	73	57	63
	18:00	71	64	74	53	61
	19:00	70	63	72	53	60
	20:00	72	61	72	55	59
	21:00	68	61	74	54	58
	22:00	71	61	71	53	57
	23:00	68	59	73	50	57
21/10/2014	0:00	70	56	71	46	55
	1:00	67	53	73	46	55
	2:00	70	52	73	46	53
	3:00	66	54	73	47	56
	4:00	70	56	72	50	56
	5:00	70	58	73	52	60
	6:00	70	60	70	51	61
	7:00	68	62	72	53	59
	8:00	71	62	72	54	61
	9:00	69	63	72	54	63
	10:00	72	66	73	54	64

Date	Time	GolePark(I)	KolkataHQ (C)	NewMarket(C)	Patauli(R)	SSKMHospital(S)
	11:00	74	66	74	54	64
	12:00	77	65	73	54	66
	13:00	77	66	76	56	65
	14:00	75	65	76	54	65
	15:00	70	66	74	54	65
	16:00	72	66	73	57	63
	17:00	74	65	74	58	65
	18:00	73	64	74	54	61
	19:00	71	63	73	53	60
	20:00	72	63	74	56	60
	21:00	71	63	73	55	59
	22:00	70	62	72	55	59
	23:00	74	60	72	48	57
22/10/2014	0:00	70	57	73	48	56
	1:00	71	55	71	45	54
	2:00	71	54	71	45	56
	3:00	72	53	71	48	55
	4:00	70	56	72	52	55
	5:00	72	58	71	53	58
	6:00	71	60	72	51	59
	7:00	72	61	72	53	60
	8:00	72	62	73	54	62
	9:00	73	64	73	53	64
	10:00	72	65	72	55	64
	11:00	73	66	72	54	65
	12:00	74	66	73	55	65
	13:00	74	65	72	54	66
	14:00	74	65	70	56	64
	15:00	73	66	70	55	64
	16:00	72	66	71	56	63
	17:00	73	66	70	57	60
	18:00	72	64	73	55	60
	19:00	72	64	73	55	60
	20:00	72	63	72	56	60
	21:00	73	63	75	56	59
	22:00	72	64	72	55	64
	23:00	72	61	72	52	58
23/10/2014	0:00	71	57	72	50	56
	1:00	72	56	72	47	55

Date	Time	GolePark(I)	KolkataHQ (C)	NewMarket(C)	Patauli(R)	SSKMHospital(S)
	2:00	71	54	73	47	54
	3:00	72	53	71	47	53
	4:00	69	56	72	51	54
	5:00	71	58	72	54	58
	6:00	70	60	73	50	58
	7:00	70	60	73	51	61
	8:00	72	61	74	52	60
	9:00	73	61	70	55	61
	10:00	72	61	70	58	61
	11:00	76	62	71	56	63
	12:00	77	62	71	54	61
	13:00	77	63	72	55	61
	14:00	76	62	71	54	61
	15:00	73	62	70	56	60
	16:00	72	62	72	59	60
	17:00	73	63	72	61	60
	18:00	72	62	72	62	59
	19:00	73	64	73	66	61
	20:00	77	66	77	71	64
	21:00	78	66	75	70	66
	22:00	85	66	76	65	69
	23:00	85	65	77	61	71
24/10/2014	0:00	73	65	75	56	68
	1:00	72	62	73	55	61
	2:00	73	58	74	52	58
	3:00	70	56	74	47	57
	4:00	69	57	73	52	57
	5:00	71	58	73	56	58
	6:00	71	59	71	50	60
	7:00	71	59	71	51	60
	8:00	72	60	71	54	59
	9:00	73	62	73	53	61
	10:00	71	62	77	55	62
	11:00	76	62	82	55	62
	12:00	77	64	79	55	62
	13:00	77	62	76	55	63
	14:00	76	61	76	54	62
	15:00	75	62	85	56	60
	16:00	75	63	86	57	60

Date	Time	GolePark(I)	KolkataHQ (C)	NewMarket(C)	Patauli(R)	SSKMHospital(S)
	17:00	76	66	79	64	61
	18:00	74	63	77	57	61
	19:00	75	64	74	58	65
	20:00	81	65	74	61	63
	21:00	82	64	73	62	62
	22:00	73	65	76	61	62
	23:00	83	64	76	55	62
25/10/2014	0:00	71	61	74	53	58
	1:00	70	57	75	55	54
	2:00	70	54	73	48	55
	3:00	70	54	75	47	54
	4:00	69	57	73	52	57
	5:00	71	58	74	59	59
	6:00	70	58	73	51	57
	7:00	71	61	76	51	59
	8:00	72	61	77	52	60
	9:00	73	62	75	53	60
	10:00	71	62	74	54	61
	11:00	76	62	76	54	61
	12:00	76	63	79	54	61
	13:00	75	62	78	52	61
	14:00	75	62	76	53	62
	15:00	75	62	77	54	59
	16:00	72	62	75	56	60
	17:00	73	63	75	66	60
	18:00	73	63	79	55	62
	19:00	76	63	80	57	58
	20:00	74	63	77	57	60
	21:00	77	63	76	62	59
	22:00	71	64	73	62	60
	23:00	71	62	74	55	57
26/10/2014	0:00	71	59	73	49	55
	1:00	71	54	73	49	54
	2:00	70	53	72	46	55
	3:00	72	52	74	47	53
	4:00	72	55	72	53	55
	5:00	72	58	73	62	57
	6:00	71	59	72	49	57
	7:00	72	60	75	52	59

Date	Time	GolePark(I)	KolkataHQ (C)	NewMarket(C)	Patauli(R)	SSKMHospital(S)
	8:00	72	61	78	51	58
	9:00	72	62	77	52	59
	10:00	71	61	75	52	59
	11:00	72	62	79	54	61
	12:00	77	62	76	55	60
	13:00	77	62	79	55	60
	14:00	77	62	79	55	61
	15:00	75	64	77	54	63
	16:00	73	63	81	65	69
	17:00	73	62	83	66	60
	18:00	73	64	77	55	59
	19:00	77	66	78	56	59
	20:00	73	66	80	57	60
	21:00	72	66	83	59	61
	22:00	74	62	87	69	61
	23:00	72	61	76	68	60
27/10/2014	0:00	72	56	73	49	57
	1:00	72	53	75	47	57
	2:00	72	55	75	45	54
	3:00	72	53	73	46	55
	4:00	70	55	72	52	57
	5:00	72	58	71	58	59
	6:00	71	59	74	51	59
	7:00	71	62	77	54	59
	8:00	73	63	75	55	61
	9:00	73	64	73	54	63
	10:00	72	66	72	55	64
	11:00	73	66	73	56	65
	12:00	76	66	73	56	65
	13:00	77	66	72	55	64
	14:00	76	65	73	54	64
	15:00	76	65	71	54	65
	16:00	77	66	71	55	63
	17:00	77	65	71	56	61
	18:00	74	63	69	51	58
	19:00	73	62	72	53	58
	20:00	73	61	72	53	58
	21:00	74	61	70	53	57
	22:00	72	60	72	52	57

Date	Time	GolePark(I)	KolkataHQ (C)	NewMarket(C)	Patauli(R)	SSKMHospital(S)
	23:00	71	57	72	49	56
28/10/2014	0:00	72	56	72	46	54
	1:00	71	55	71	46	54
	2:00	72	52	78	45	54
	3:00	72	51	75	45	54
	4:00	71	55	76	50	55
	5:00	72	58	74	54	57
	6:00	73	59	73	52	57
	7:00	71	62	79	52	60
	8:00	72	63	75	54	61
	9:00	72	64	73	55	62
	10:00	71	66	73	55	64
	11:00	73	66	75	54	65
	12:00	76	65	73	54	65
	13:00	76	65	73	55	65
	14:00	77	65	72	55	64
	15:00	78	65	71	55	64
	16:00	76	65	72	56	64
	17:00	78	65	73	59	61
	18:00	79	63	73	52	59
	19:00	80	62	73	53	58
	20:00	81	61	72	53	58
	21:00	81	61	72	52	57
	22:00	81	60	73	50	57
	23:00	84	59	75	49	57
29/10/2014	0:00	82	56	72	47	59
	1:00	73	54	75	44	54
	2:00	74	54	73	45	52
	3:00	70	53	72	44	53
	4:00	69	55	72	49	55
	5:00	71	58	72	54	58
	6:00	71	60	73	53	58
	7:00	70	62	72	53	58
	8:00	71	62	73	54	61
	9:00	72	64	73	54	63
	10:00	71	65	74	54	65
	11:00	72	65	78	55	65
	12:00	73	65	75	53	65
	13:00	73	65	74	54	64

Date	Time	GolePark(I)	KolkataHQ (C)	NewMarket(C)	Patauli(R)	SSKMHospital(S)
	14:00	73	65	77	53	65
	15:00	73	66	74	53	66
	16:00	73	66	76	62	66
	17:00	73	65	76	62	65
	18:00	73	64	74	55	61
	19:00	75	63	77	54	66
	20:00	72	62	73	55	59
	21:00	72	62	80	53	57
	22:00	71	60	75	52	57
	23:00	72	58	76	50	56
30/10/2014	0:00	71	57	75	46	55
	1:00	71	56	73	48	55
	2:00	71	55	74	46	55
	3:00	71	60	72	45	60
	4:00	70	63	75	53	60
	5:00	73	61	76	60	62
	6:00	72	61	74	59	63
	7:00	72	64	75	57	62
	8:00	73	63	73	55	61
	9:00	77	64	73	55	63
	10:00	75	66	72	54	64
	11:00	77	65	77	54	64
	12:00	77	65	79	54	64
	13:00	77	65	75	54	64
	14:00	75	64	74	53	64
	15:00	75	64	73	54	63
	16:00	75	64	73	54	63
	17:00	73	64	75	56	61
	18:00	73	63	74	52	59
	19:00	72	62	74	54	60
	20:00	72	61	73	54	58
	21:00	73	61	72	54	57
	22:00	71	60	73	53	57
	23:00	71	58	72	49	55