THE DEVELOPMENT OF AIR QUALITY MONITORING SYSTEM USING INTERNET OF THINGS AND LPWAN

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The Graduate School of Thai-Nichi Institute of Technology has been approved and accepted as partial fulfillment of the requirement for the Master's Degree

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ATTAPON UDOMLUMLERT : THE DEVELOPMENT OF AIR QUALITY MONITORING SYSTEM USING INTERNET OF THINGS AND LPWAN. ADVISOR : DR. NATTAGIT JITEURTRAGOOL AND CO-ADVISOR : DR. THATTAPON SURASAK, 108 PP.

A long-term exposure to PM 2.5 may lead to health risks, cardiac arrhythmias and heart attacks, and respiratory effects such as plaque deposits in arteries that can eventually lead to cardiovascular abnormalities. This paper proposes the use of Internet of Things (IoT) and applications to monitor air pollution and weather using various sensors connecting through ESP32. We propose a wide-area system that monitors and detects the PM2.5. The conceptual model is clearly described and discussed in this paper with architecture and implementation framework. The Air Quality Monitoring System using LPWAN and IoT gave very precise results as a real-time graphical interface via mobile application. Keywords-IoT, PM2.5, LPWAN, ESP32, Air Quality

Graduate School
Field of Information Technology
Academic Year 2020

Student's signature ……..….
Advisor's signature ……..…

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Attapon Udomlumlert

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Chapter 1
Introduction

According to a report by Gartner, there will be 8.4 billion connected things (IoT devices) in 2017, and Gartner forecasts that the number will reach 20.4 billion by 2020. In addition, IHS Markit predicts that IoT devices worldwide will jump 12 percent on average annually from 2017 to reach 125 billion in 2030 [1], [2]. Therefore, we have already understood that cloud services offer a platform with storage and other resources such as business analytic systems, IoT passes, network control, and management systems through the internet from a remote data center. Cloud services are established as ideal solutions for several kinds of businesses. For example, they provide data and applications to workers no matter where they are in the world with extreme reliability. Moreover, they improve collaboration between people and between IoT devices, enabling the easy sharing of information in virtually real time. However, a huge number of applications and IoT devices operate on the cloud, leading to severe loads and latency on cloud infrastructure. Many companies use cloud computing to increase their agility by allowing authorized customers to access their applications, data, and analytics anywhere there is Internet access.

According to air pollution reports from both the Pollution Control Department of Thailand (PCD) and an international air-quality monitoring website, people in Bangkok continued to suffer from unsafe PM2.5 levels due to the cold weather that was conducive for air pollution, in addition to the weather being too arid to create artificial rains. Bangkok's hourly real-time Air Quality Index (AQI), which is based on the United States Environmental Protection Agency standard, reported on aqicn.org that the PM2.5 level in Bangkok had reached 165 in February 2018, which was unhealthy for everyone especially vulnerable groups such as children, the elderly, and sick people. PM2.5 is fine particles with a diameter of 2.5 micrometers. The extended exposure of PM 2.5 can cause serious health problems to living organisms including allergies, cardiovascular diseases, and lung diseases. PM2.5 is also one of the factors that leads to chronic obstructive pulmonary disease (COPD) which may become the third leading

cause of death worldwide by 2020[3]. PM can exist as a mixture of microscopic solids and liquid particles which can vary in size, generally between 0.001 to 500 μm [4].

The Ministry of Natural Resources and Environment revealed that air pollution in Bangkok was mainly caused by cars and the transportation sector as can be seen in **Figure 1.1**. Auto registration data showed that there were up to 9.778 million vehicles on Bangkok's roads. PM2.5 level at every air-quality monitoring station in Bangkok was considered unsafe since January 2018 according to Pollution Control Department of Thailand (PCD) records. The PCD staff said that the authorities have a plan to switch from Euro IV standard petrol to Euro V standard in 2023, which has a lower level of sulphur and is hence more environmentally friendly. He said the average PM2.5 records in Bangkok from 2016-18 were well above levels considered safe.

With the rising public health concerns relating to PM2.5, PM sensors have become the subject of scientific interest. The innovation of affordable PM sensors is a fast-growing industry as the equipment can be installed in a designated area and connected to a monitoring device to measure aerosol concentration. One of the low-cost sensors, SPS30, has attracted attention for its ability to measure air quality. The sensor consists of a laser diode and a built-in fan to admit air into a chamber. The light from the diode scatters which is detected depending on particle size and transformed into a signal.

By incorporating sensors to the Internet of Things (IoT), it is possible to monitor PM in uninhabited areas like forest or farmland. IoT is a system that can be employed to regulate and collect data from different sensors without human intervention. Currently, IoT is being integrated into healthcare as it enables health professionals to monitor a patient's condition in real-time, contributing to more accurate decisions in regards to treating various illnesses. The concept of IoT can also be applicable to pollution control as it may assist in the detection of pollution levels within a city. By combining with Cloud computing, the IoT can potentially be utilized to keep track of PM2.5 concentration in real-time and alert the public.

Figure 1.1: Traffic during the peak hours in Bangkok. (Left), The chemical haze of yellowish smog blanketing the sky across Bangkok. (Right)

A microcontroller, such as ESP32 and Arduino, is a part of the IoT system which can provide internet connectivity. The pollution monitoring system can be developed to detect temperature, humidity, and PM concentration by connecting the microcontroller to other sensors [5]. This principle can be administered in other fields, including agriculture [6] and business [7] to construct a real-time monitoring system.

The problem faced when installing a sensor system in an isolated site such as a forest is the ability to transfer data to the gateway. Long-range (LoRa) is a type of low power wide area network (LPWAN), which is a leading innovation that is vastly explored. LoRa offers many advantages including long battery lifetime, minimal capacity, and low cost. Consequently, LoRa presents an attractive feature within IoT technology.

In this study, the IoT based system with LoRa will be constructed to detect temperature, humidity, PM2.5, PM10, and Air Quality Index. This prototype can potentially be applied to remote areas to monitor desired variables without human intervention.

1.1 Statement of the problems

The level of air pollution has become more prevalent in many countries around the world. Within the air pollution, the presence of particulate matter (PM) can cause serious health problems to living organisms such as allergies, cardiovascular diseases, and lung diseases. Fine particles with the diameter of 2.5 micrometers, also known as PM2.5, can pose a great risk to health. PM2.5 is one of the factors that leads to chronic obstructive pulmonary disease (COPD), which may become the third leading cause of death worldwide by 2020.

1.2 Objectives

1. To create a low-cost sensor network to monitor PM in uninhabited areas like forest or farmland
2. To examine the performance of long-distance data transfer from node sensor to gateway via LoRa
3. To build a network node sensor prototype to monitor PM 2.5, temperature and humidity, or other variables

1.3 Significance of the research

The prototype from this research can be utilized in any area around the world to obtain set data from the designated locations for further studies.

1.4 Scope of study

- The prototype from this work is created using one-to-one model only
- The sensors within the prototype will only include PM2.5, PM10, humidity and temperature
- LoRa used within the study has an unauthorized frequency band of 915 MHz
- ESP32 will be used as the microcontroller in this study

1.5 Conceptual Framework

The research aims to create the IoT- LPWAN prototype to determine the performance of data transfer from a node to gateway.

1.6 Research hypothesis

The prototype can be implemented in a remote environment or within a wide area which can significantly contribute to the air quality management system.

1.7 Definitions

- PM2.5 is an acronym for particulate matter 2.5, which is dust particle with a diameter of 2.5 microns

- LoRa or Long-Range is a low-cost and low-power device which can provide an unlicensed frequency spectrum of 915 MHz in UHF band to connect to IoT devices

- LPWAN/LoRaWAN or low-power wide-area network is a type of wireless telecommunication which is designed to allow long-range communications under a low bit rate. LPWAN can be used to control sensors with LoRa.

- ESP32 is a low-cost, low-battery microcontroller with integrated Wi-Fi and LoRa

- Sensor Network is created by integrating a group of sensor nodes and a single powerful gateway.

- Gateway is an integration of ESP and LoRa that connect to the internet and cloud server

- IoT or the Internet of Things is a sensor unit with a computing system that can automatically transfer data over a network without human interaction.

Chapter 2
Literature Review

The Internet of Things (IoT) is a network that connects identifiable components, or “things”, to the Internet smart sensors, in which those “things” may possess sensing and programmable capabilities. By using the data collected from “things”, its state can be changed anywhere and anytime.

The use of IoT devices in industries is steadily increasing. These devices can be used for monitoring tasks and improving the efficiency of day-to-day work. A Raspberry Pi 3B+ or ESP32 can be used as a fog device in conjunction with other devices at a low cost for small businesses and factories. The proposed platform enables the remote monitoring of raw materials, parts, and equipment and inventory control. Moreover, it can help in terms of analytics such as providing statistics on livestock and produce. For manufacturing and retail industries, collaboration with connected supply chains can easily be established by IoT. IoT devices can help drastically cut the cost of production and inventory as well as reduce waste products. However, besides considering low costs, implementing IoT in businesses or factories requires that all devices are connected securely and privately.

Subsequently, smart sensors are created along with IoT. Smart sensors are created by the fusion of sensing and signal-processing functions. Therefore, an IoT incorporates a local computing unit which results in a smart sensor [6].

2.1 Air pollution detecting system using IoT

The IoT monitoring system to measure PM2.5 in urban areas can be built by connecting sensors to a microcomputer [7,8]. A weather monitoring system is created to collect temperature, humidity, PM2.5, and PM10. The data obtained is stored in a cloud server that can be downloaded and shared over the network [3]. In addition, IoT can be employed to assess indoor air quality in order to prevent long-term exposure of PM2.5 [9]. This would enhance the well-being of newborns, elderlies, and other sensitive groups who are susceptible to poor air quality.

An architecture of IoT based cloud to monitor PM2.5 is presented in Figure 2.1 Using a microcontroller system with LED and dust sensor, the concentration of PM2.5 from the reflected light of dust in air can be detected. This would be particularly effective to observe very fine particles such as cigarette smoke. Within the architecture of IoT PM2.5, four layers are built: physical layer to sense PM2.5, conceptual layer to receive data from physical layer, communication layer to convert data, and application layer to present the information to the user.

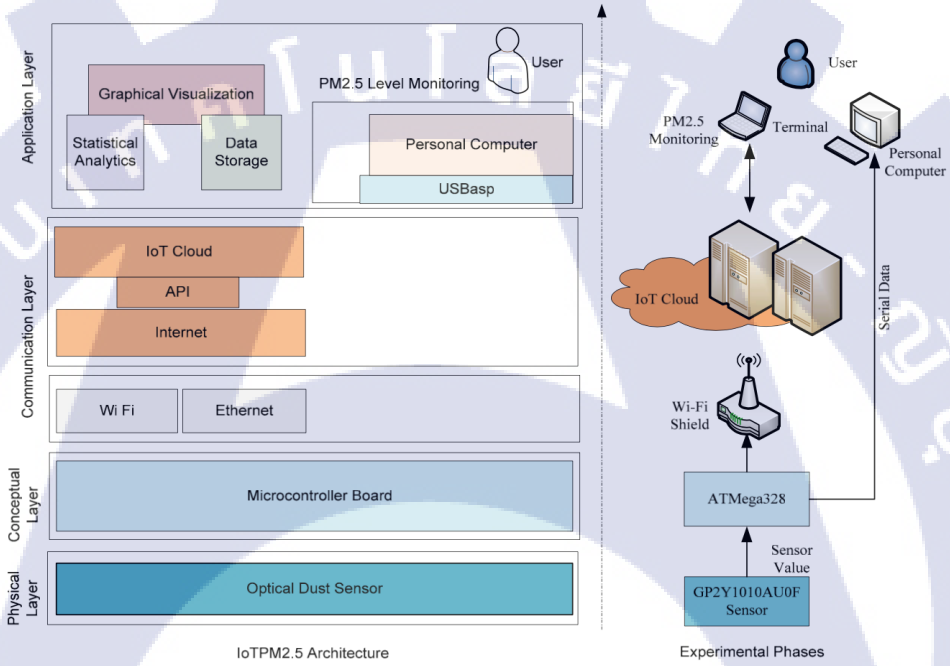


Figure 2.1: IoTPM2.5 architecture and experimental setup [10]

The result from the IoT measurement system was obtained, which illustrated that it can be used to measure and monitor PM in real time.

The IoT based weather monitoring system can also be developed using sensors connecting to a microcontroller. A prototype of a weather monitoring system to collect temperature, humidity, PM2. 5, and PM10 was created. The data can then be stored in a cloud server which can be downloaded and shared over the network. Figure 2.2 shows the proposed system in which the sensors are connected to Raspberry Pi microcontroller [5].

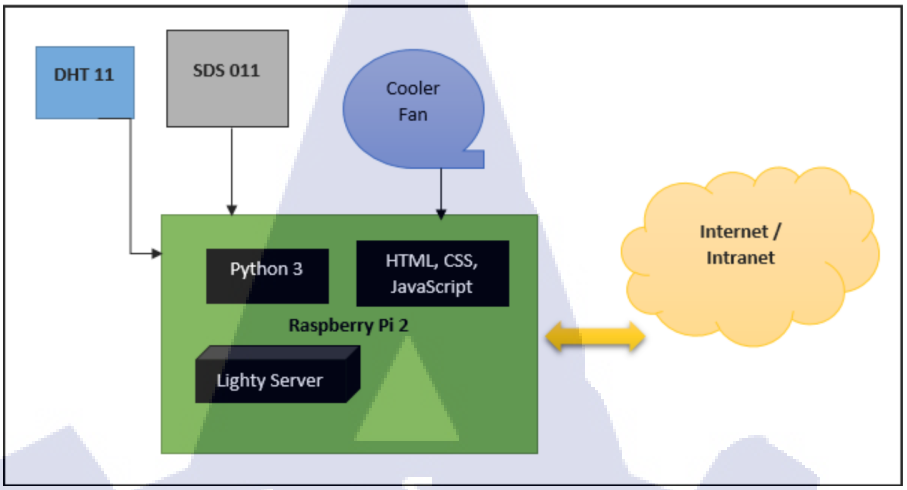


Figure 2.2: Architecture of a Weather Monitoring System

Mobile PM2.5 Sensor (MPM) to detect air quality can be superimposed on the Google map. The PM2.5 sensor unit can be embedded into a cell phone, in which a microcontroller can be used to process the data before sending it to the cloud platform. The GPS can be utilized to note the user's location through a smartphone which can be transferred to create PM2.5 map [11].

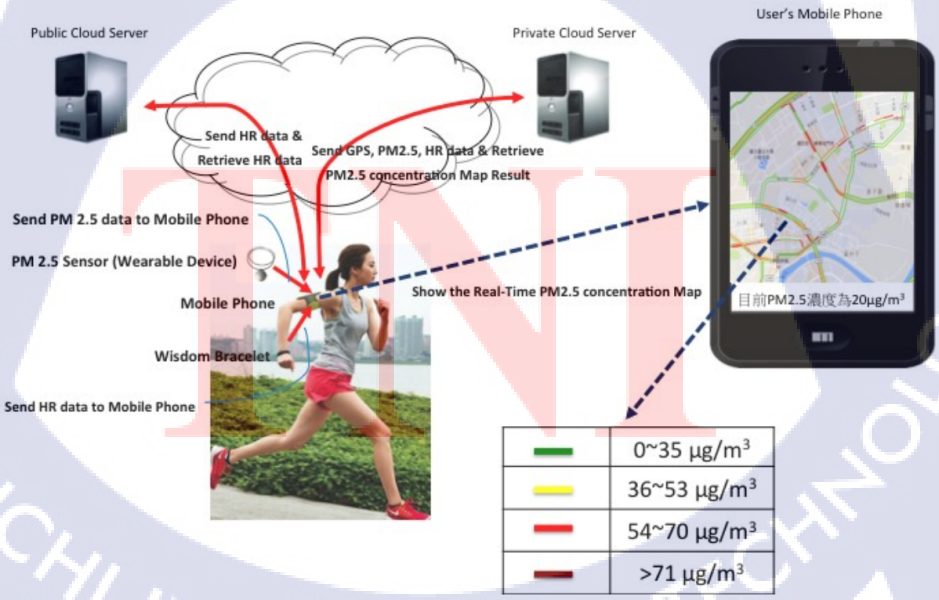


Figure 2.3: The scenario of the Mobile PM2.5 Sensor (MPM) work

2.1.1 Low-Cost Sensor

A study conducted showed that relative humidity is the key factor that affects the accuracy of PM2.5 and visibility. A design of a remote monitoring system is constructed which includes General Packet Radio Service (GPRS) to link to a cloud server. The remote sensing system has five parts: the monitor mainframe, the transmitting module of GPRS, the server software in monitoring center, Cloud computing server, and the Internet network. The visibility can be calculated in equations (2.1) and (2.2).

Equation (2.1): $Vis = -(\ln 0.02)/\beta$

Equation (2.2): $\beta = \Sigma Qeni\pi r2i$

Equation (2.1) evaluates the general relationship between the visibility and extinction coefficient, where β is the extinction coefficient and Vis represents visibility. Then, β can be calculated with droplet spectra, where ni is the droplet number of concentration of channel i, ri represents the measured radius of channel i, and Qe is the normalized extinction efficiency.

Within the experiment, they used laser scattering principle and collected the scattering light to calculate the change of scattering light against time. Then they compared their result with Yan's work in 2015. Unlike Yan's result which showed the concentration of PM2.5 by linear and exponential models from extinction coefficient, the study revealed that the visibility decreases as mass concentration of PM2.5 increases, but the visibility rate decreases gradually, as illustrated in Figure 2.4 [12].

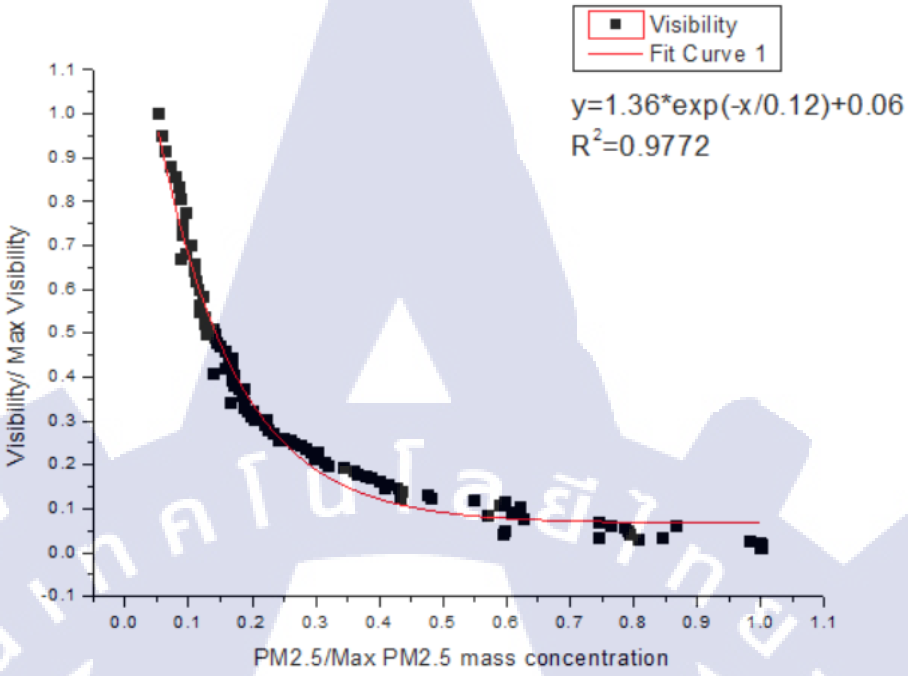


Figure 2.4: Regression model of normalized visibility and normalized ambient PM2.5 using an exponential regression

From this, it can be observed that visibility and PM2.5 mass concentration share a negative correlation relationship. Therefore, the normalized visibility (y) and the normalized PM2.5 mass concentration (x) is fitted into the exponential function as followed:

Equation (2.3): $y = a[\exp(-x/b)] + c$

The parameters a, b, and c can be obtained from the equation.

The method evaluation is carried out by using 1022 samples to retrieve visibility value. Figure 2.5 demonstrates that PM2.5 can be a good surrogate for visibility, though the exponential model can only be used for a first-order estimation of visibility when only PM2.5 data is provided.

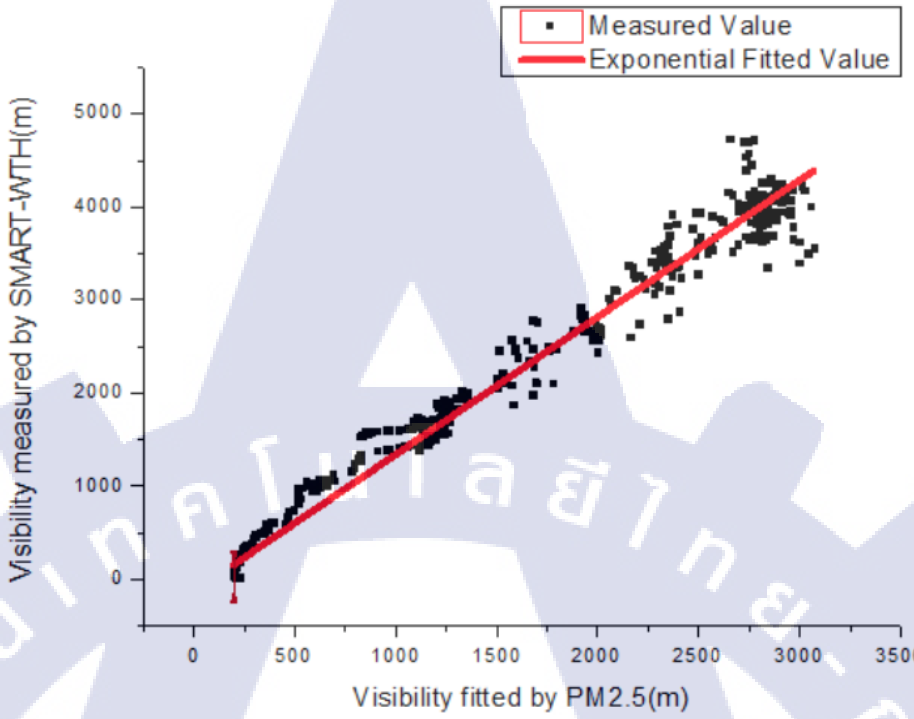


Figure 2.5: Relationship between ambient visibility fitted from the sensing system and visibility measured by a Visibility Meter (SMART-WTH)

The result illustrates that there is a strong correlation coefficient between the visibility and the measured values when the relative humidity is below 60%. The employment of Cloud to store data is efficient because it can be connected to many sensing monitors.

A comparative study is carried out to test the performance of SDS011 which is a low-cost sensor to evaluate its reliability [13]. The sensor is being compared with a highly reliable sensor welas 2100 sensor by Palas. According to the result, SDS011 and welas 2100 sensors reacted simultaneously when encountering the increase in concentration and shared similar reading trends. In Figure 2.6, the concentration of PM2.5 for SDS011 and Palas system is shown.

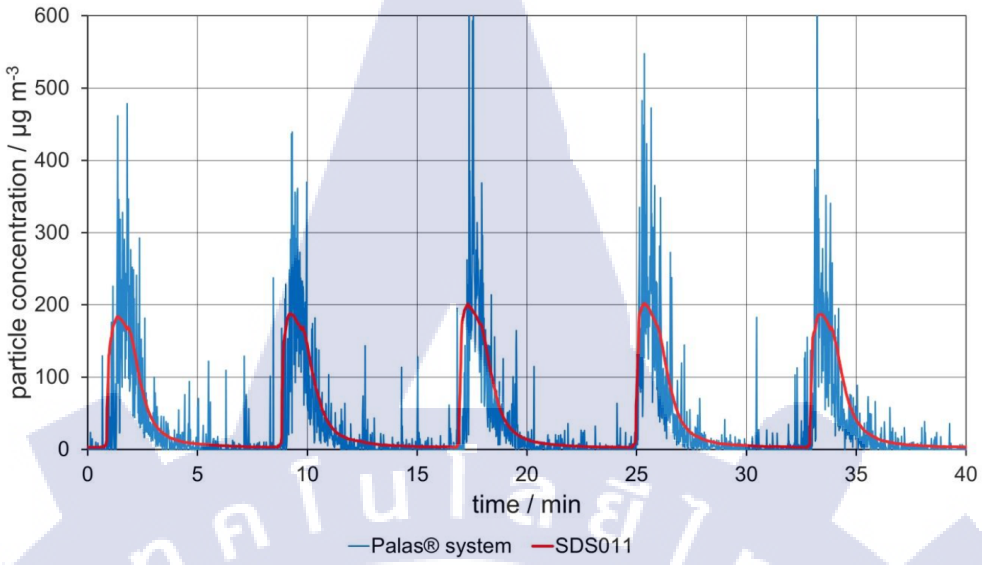


Figure 2.6: Data comparison between the PM2.5 concentrations of SDS011 and Palas system.

It should be noted that SDS011 curve was smoothened, which indicated it did not take the temporary concentration increase within the measuring chamber into account.

In the experiment to test optical results to gravimetric result, the gravimetric reference of 69 ug/ m^3 dust was employed to test the devices' accuracy. The concentration obtained by the Palas system was 66 ug/m^3, while that by SDS011 was 44 ug/m^3, as shown in Figure 2.7.

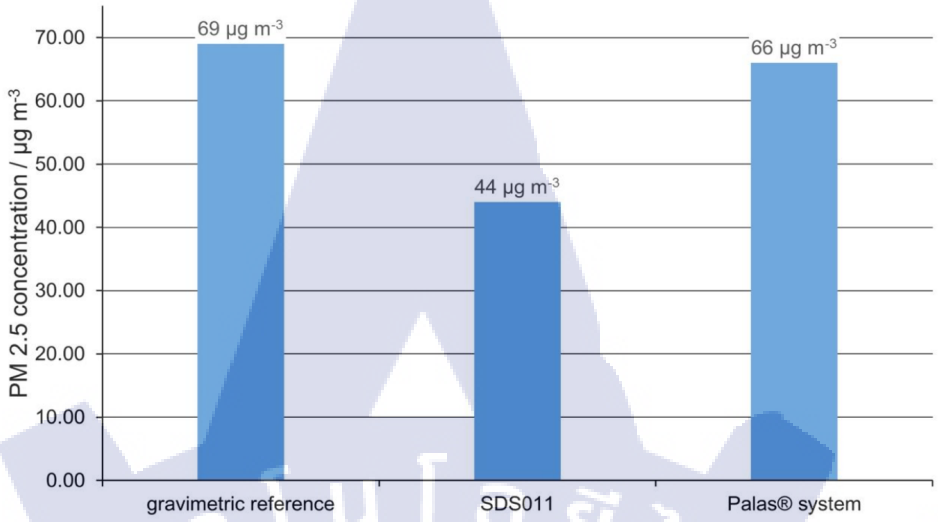


Figure 2.7: The values of PM concentration for gravimetric reference, SDS011, and Palas system

According to the result, it should be noted that despite its signal response to a change in concentration, SDS011 has certain limitations. As can be seen in Figure 2.6, the relaxation of the signal is delayed, causing the graph to become smoothened. When the experiment to test quantitative comparison is carried out, the result indicated the values that are considerably below the recorded values of the reference, Figure 2.7.

Nevertheless, SDS011 has the potential to be utilized in the system where multiple sensors are required under controlled temperature and humidity. Maintenance costs are the most likely to be the largest contributor of the overall cost, which could be disadvantageous. Therefore, SDS011 can be used to obtain the qualitative measure, but additional sensors are required to improve the accuracy of quantitative data [13].

The limitations of sensor SDS011 has been widely studied. Liu et al. (2019) has conducted an experiment to test the performance of the sensor under high temperature and high humidity. Using the temperature ranging from -14℃ to 11.4℃ and relative humidity (RH) range of 15.4-99.5%, the result showed that the errors occurred when the temperature is not at 0℃ and humidity reached 80%. The errors could be as much as 10-15 ug/m^3 when RH is close to 100%.

Figure 2.8 illustrates the data obtained from sensors. The graphs (a), (c), and (e) show the errors of the sensor that could occur due to temperature. In addition, graphs (b), (d), and (f) demonstrate the errors based on relative humidity [14].

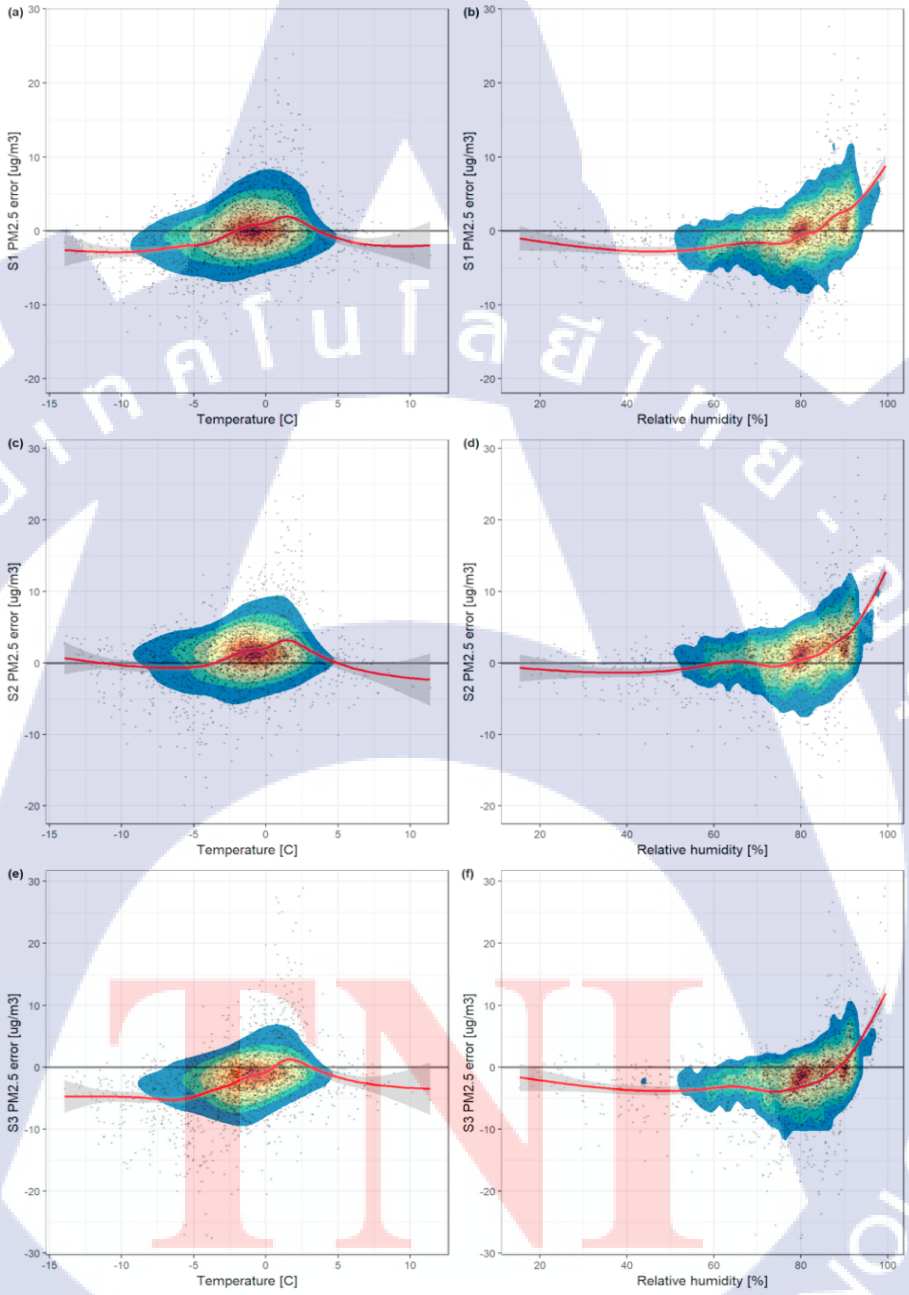


Figure 2.8: PM2.5 sensor error caused by temperature (left column) and RH (right column).

Black dots represent the hourly average observations while the coloured areas highlight the density of occurring observations. The red line indicates a Loess fit to the data whereas the gray area shows the 95% confidence intervals. When the graphs of temperature and RH are overlay, it can be observed that humidity may play a more important role in causing the error, as illustrated in Figure 2.9.

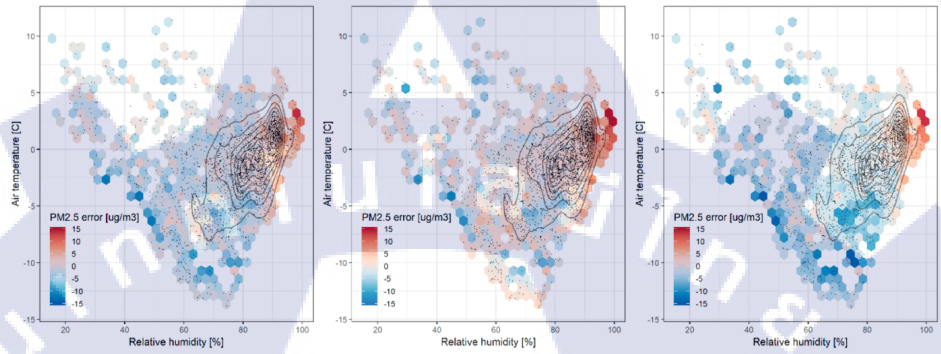


Figure 2.9: The colored hexagons represent the mean error of the sensor. The isolines indicate the density of the errors where they are most located

From Figure 2.9, the effect of RH higher than 80% can cause a significant increase (between 10 and 15 ug/m^3) in PM concentration. The most substantial error occurs when RH is above 90% at T above 0°C [14].

2.1.2 Sensirion SPS30 Sensor

Sensirion SPS30 was used to monitor indoor PM2.5 concentration. The sensor was particularly chosen due to the fact that it has been pre-calibrated with potassium chloride salt and TSI DustTrekTM DRX Aerosol Monitor 8533 as references [15]. Table 2.1 presents the specifications of Sensirion SPS 30.

Table 2.1: Sensirion SPS30 specifications

Power Requirements	4.5 – 5.5 V , < 60 mA
Range of the instrument	1 – 1000 µg / m^3
The lower limit of the sensor	0.3 µm
Minimum scanning interval	1 sec
Dimensions	40.6 × 40.6 × 12.2 mm

A research was conducted to compare a series of low-cost PM sensors. Based on the result, all sensors had a lower limit of detection below 0.6 ug/m^3 [16]. Figure 2.10 depicted the lower limit of detection of various low-cost sensors under controlled conditions.

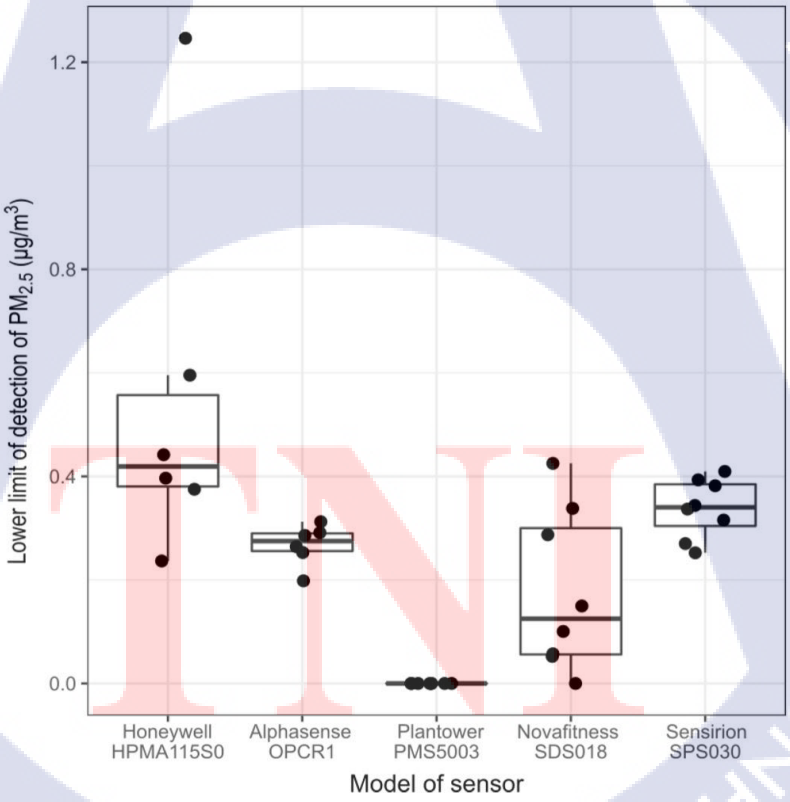


Figure 2.10: The lower limit of detection of PM2.5 for each low-cost sensor. The box and whisker plot horizontal lines indicate the average result whereas the dots represent the values of each sensor

2.2 IoT in Healthcare

IoT can be integrated into several aspects within healthcare to enhance both services and applications. Figure 2. 11 shows a variety of tasks where IoT can potentially be utilized [17].

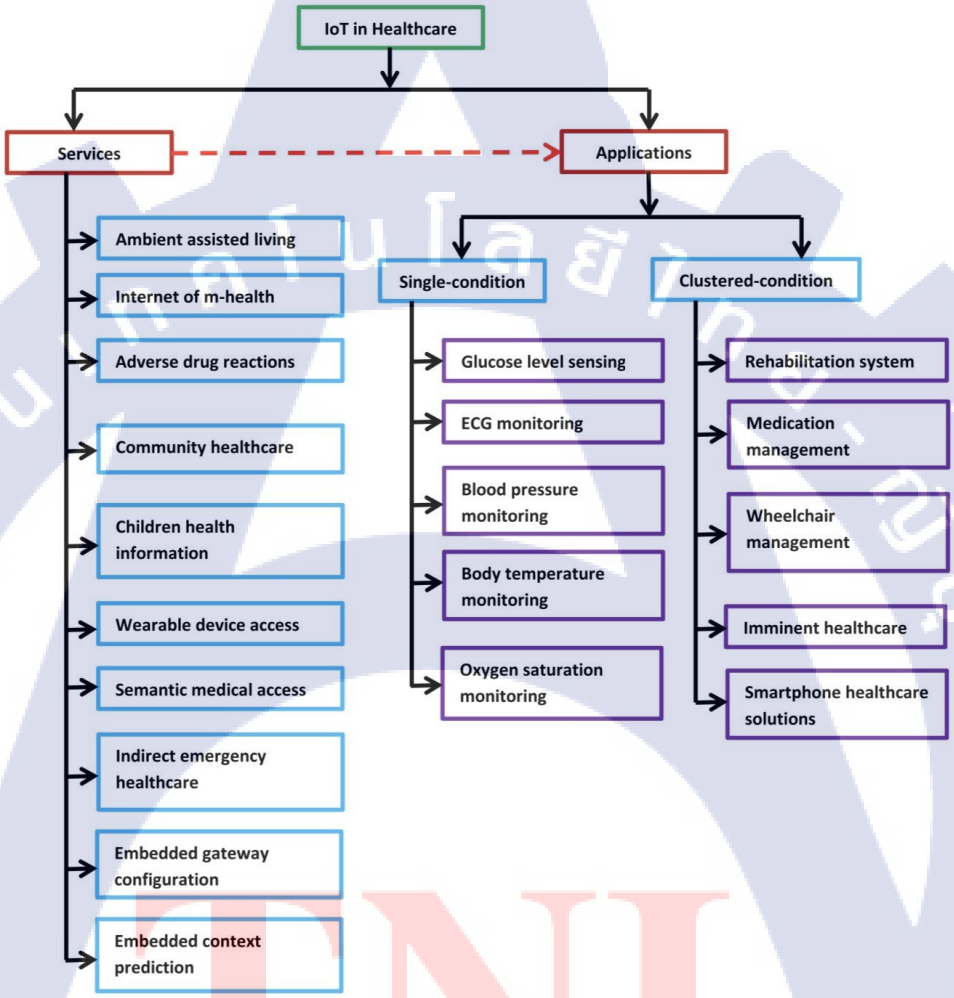


Figure 2.11: The implementation of IoT in healthcare

From Figure 2. 11 above, it can be seen that IoT can serve as one of the main technologies within the healthcare industry. With the rise of aging society, ambient assisted living is one of the most critical medical services. An IoT combined with artificial intelligence could be built to assist incapacitated patients, extending the life of

senior population in a safe and convenient approach [17]. By introducing this innovation, the elder generations can regain their independence and autonomy.

In addition to patient care and hospital services, a remote health monitoring system, or wearable device access, has become the subject of interest due to its potential to improve the medical field. Multiple wearable sensors for health such as ECG, respiratory rate, and skin temperature can be employed to record the data before sending it to a data concentrator, forming the IoT system. The collection of data is transferred to the Cloud for storage [18]. The data record would serve as a rich source of information for health specialists which would contribute to a more accurate diagnosis. This IoT innovation can also be utilized to enhance safety in the construction environment. Due to occupational hazards, construction workers are subject to UV radiation overexposure and high CO2 concentration. An IoT system to detect environmental conditions and physiological states is built to improve the work environment using a wearable body area network (WBAN). The WBAN would collect the raw data before sending them to the IoT gateway via LoRa [19]. The use of this system can also be implemented in the clinical environment.

An automatic PM monitoring system called iDust is built to assist in a healthcare real-time monitoring system [19]. The system is made of the data collection unit and a Web portal developer. Unlike other systems, iDust is based on open- source technologies, which can be more advantageous in terms of modularity, scalability, low-cost, and easy installation than the existing systems. The results of the experiments illustrated that iDust can effectively assess PM, which can be utilised to monitor PM of the indoor areas [19].

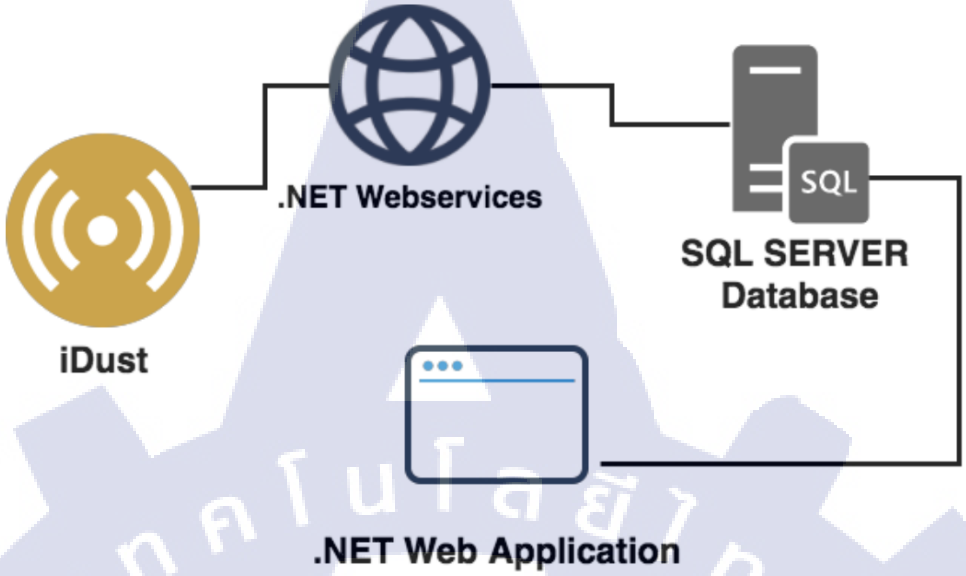


Figure 2.12: iDust system architecture

2.3 The utilization of LoRa with the IoT

Long range (LoRa) is a long-range communication network which was derived from chirp spread spectrum modulation (CSS), a long-distance communication network traditionally employed within the military. The data bit rate can be expressed in terms of spreading factor and modulation bandwidth (Hz) as shown in Equation (2.4) below [20]:

$$R_b = \mathrm{SF} * \frac{1}{\left[\frac{2^{\mathrm{SF}}}{\mathrm{BW}}\right]} \text{ bits/s}$$

Equation (2.4): The LoRa modulation bit rate Rb

SF = spreading factor

BW = modulation bandwidth (Hz)

The higher spreading factor would increase the signal to noise ratio which contributes not only to sensitivity and range, but also air time of the packet [21]. LoRa has several fascinating characteristics. Firstly, it is a large network range which spans to many kilometers outdoors. Secondly, it has the same carrier frequency but different spreading factor. This gives it an opportunity for researchers to divide the network into subchannels. Furthermore, the strongest transmission will be obtained when many transmissions occur simultaneously, which means that the transmission will not obstruct each other [21].

A study is carried out to determine the reliability of the LoRa node network. Six nodes were set up on the university campus where each one was placed 1.5 m above the floor. The nodes are set to send a 10-byte-data packet. From the study it is shown that the reliability of 80% can be obtained over a period of 2.3 hours [21]. The study concluded that in addition to being energy efficient, LoRa can serve as a practical device for long communication ranges as the packet is received in a non-destructive transmission. It can certainly be used within the application of IoT [21].

LoRaWAN exploits a star architecture in which data from one end-device are sent to gateways before reaching another end-device and a central core network. Within the network, each node can send data to multiple gateways and each gateway would then send the packet to the cloud-based network server [20].

A comparative study between LoRa and narrowband (NB)-IoT is carried out to determine suitable conditions for each IoT system. Table 2.2 illustrates the physical features of LoRa and NB-IoT.

Table 2.2: Comparison between physical features of LoRa and NB-IoT.

PHY parameters	LoRa	NB-IoT
Modulation	CSS	QPSK
Link Budget	154dB	150dB
Spectrum	Unlicensed	Licensed LTE bandwidth
Bandwidth	500 KHz - 125 KHz	180KHz
Peak Data Rate	290bps-50Kbps (DL/UL)	DL:234.7kbps; UL:204.8kbps
Energy Efficiency	$>$ 10 years battery life of devices	$>$ 10 years battery life of devices
Spectrum Efficiency	Chirp SS CDMA better than FSK	Improved by , Standalone, Inband guard band operation
Power efficiency	Very High	Medium High
Area Traffic Capacity	Depends on gateway type	40 devices per household $\approx$ 55k devices per cell
Interference immunity	Very High	Low
Standardization	De-facto Standard	3GPP Rel.13
Mobility	Better than NB-IoT	No connected mobility (only idle mode reselection)

The research determined the performance of LPWA networks based on the power efficiency, capacity, quality of service, reliability, and range of coverage. From the study, the result indicated that LoRa serves as a more appropriate choice in terms of cost, battery life, deployment, and coverage [22] . Alternatively, NB- IoT outperforms LoRa when it comes to range, latency, quality of service, and data rate [20]. Figure 2. 13 illustrates the comparison between NB- IoT and Lora based on the indicated factors.

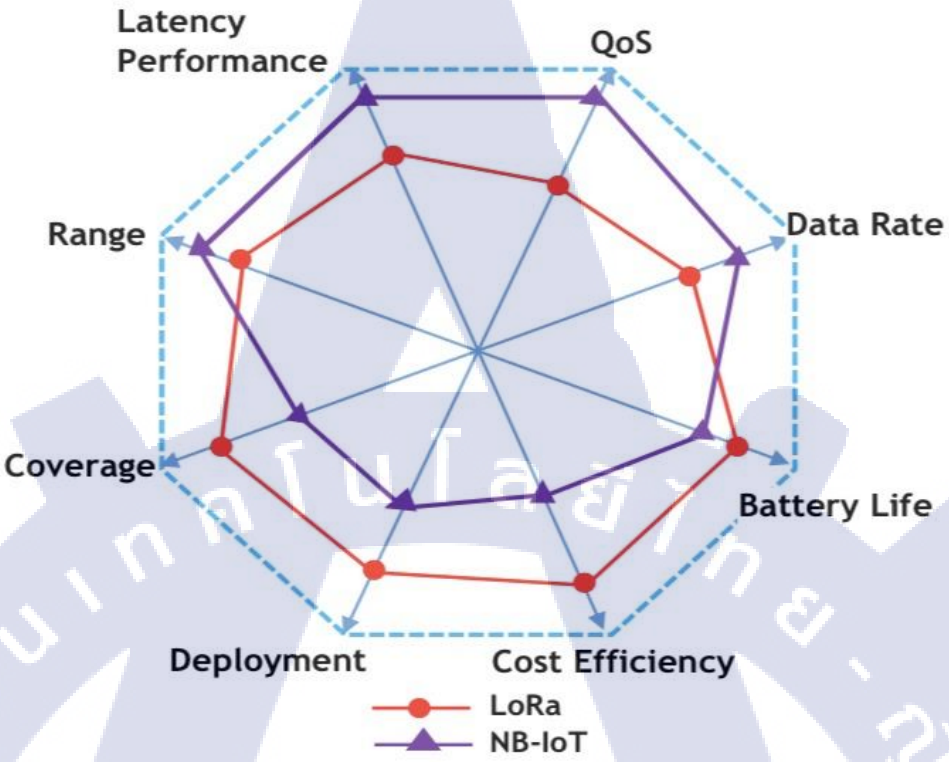


Figure 2.13: The based comparison between NB-IoT and LoRa

From Figure 2.13, it can be concluded that specific research parameters are necessary to determine whether NB-IoT or LoRa-IoT is an appropriate choice for the application. One drawback of LoRa that may raise a concern is the unauthorized frequency bands which may potentially be obstructed by other wireless devices, but it would also depend on the work detail and location in which it is to be implemented [23]. NB-IoT may provide better performance in terms of data rate, quality of service, latency, and network range, but these factors may not be the most prioritized factors of IoT technology [24]. As can be seen in Figure 2.14, LoRa is one of LPWA networks which has high range capacity and less bandwidth requirement.

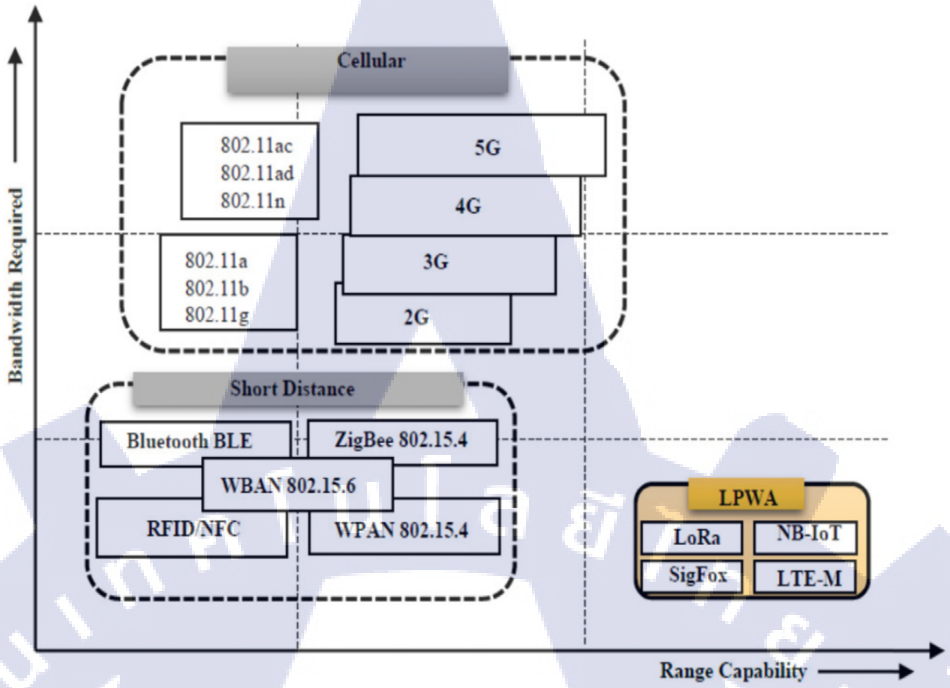


Figure 2.14: Required bandwidth vs. range capacity of short distance, cellular, and LPWA

The transfer of data from IoT using 3G/4G networks can be costly for long-range transmission. As a result, LoRa is chosen as a cheaper and more practical alternative. However, buildings, trees, or other radio signals may interfere with the signal which may affect its performance. LoRa gateways (GWs) are proposed to form a wireless mesh network that can enhance the packet delivery ratio (PDR) by 30% compared to that of the star-network. The disadvantage of this system is the latency of a node to generate data and upload them to the GW. However, the method enables the GW to decide on a specific node it wants the data to be initiated, improving the flexibility of data collection [25].

A sustainable IoT using low-power wide-area network was designed using NB-IoT and LoRa. Unlike NB-IoT, LoRa is an attractive choice due to the unlicensed spectra, 433, 868, and 915 MHz [26]. However, the interference from other LoRa devices with the same frequency could potentially reduce its reliability. Figure 2.15 presents the coverage probability (P_{cov}) in relation to density of LoRa devices that work over the same frequency.

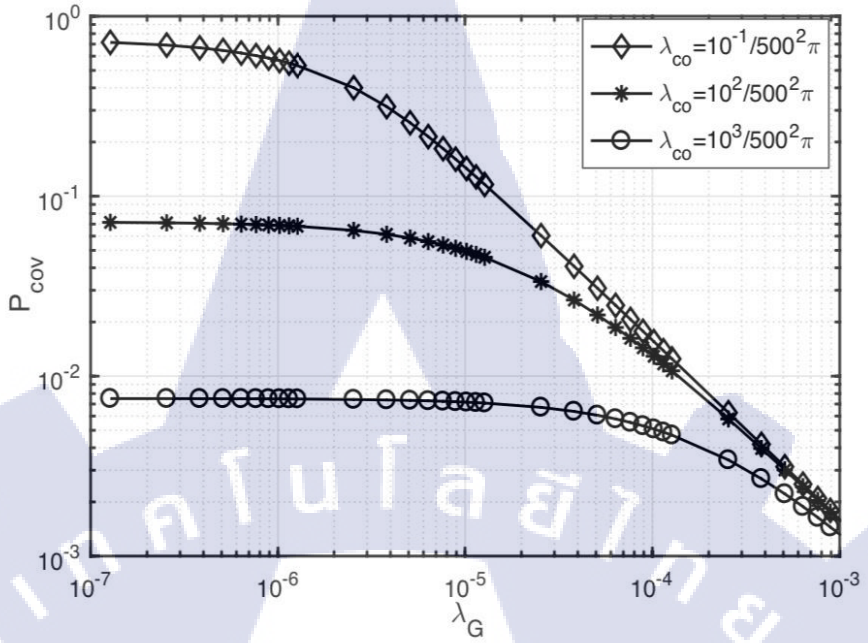


Figure 2.15: The coverage probability (P_{cov}) versus density of LoRa devices (λ_G) that share the same frequency

From Figure 2. 15, it can be seen that the coverage probability drastically decreases as more devices are set up within the area [26]. Since sustainability is prioritized, the battery lifetime is considered. LoRa gateways were installed on top of LoRaBox, which consisted of the Orbit and 30 LoRa devices, to collect data. LoRaBox would choose a proper mode of packet before sending the data to the gateway. Afterward, the gateway would forward the data to the cloud server for further processing and storage [26]. Figure 2. 16 shows the diagram of how the data are transferred from LoRaBox to a gateway before going to the cloud server.

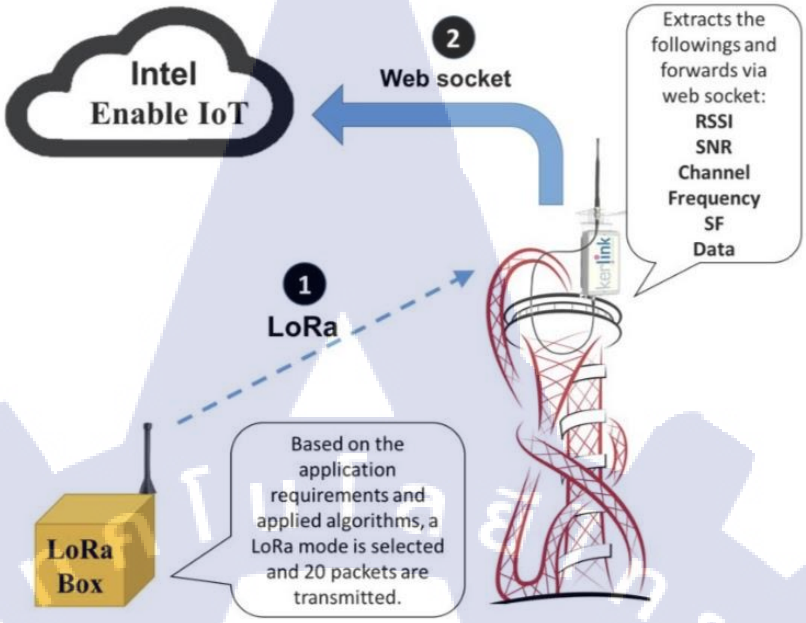


Figure 2.16: The process in which the data are collected from LoRaBox and sent to the cloud server

To minimize signal interference and enhance data communication performance, LoRa can also be set up in a mesh networking system. The microprocessor sends and receives data wirelessly via LoRa, whereas the nodes and gateways use the same hardware platforms. The use of IoT sensors with LoRa automatically forms the mesh network in which a gateway would collect data from IoT sensors. Then, the gateway would send the data to the user interface where the information relating to the status of wireless mesh network and IoT sensors is shown. Figure 2.17 illustrates the IoT system architecture of LoRa wireless mesh network.

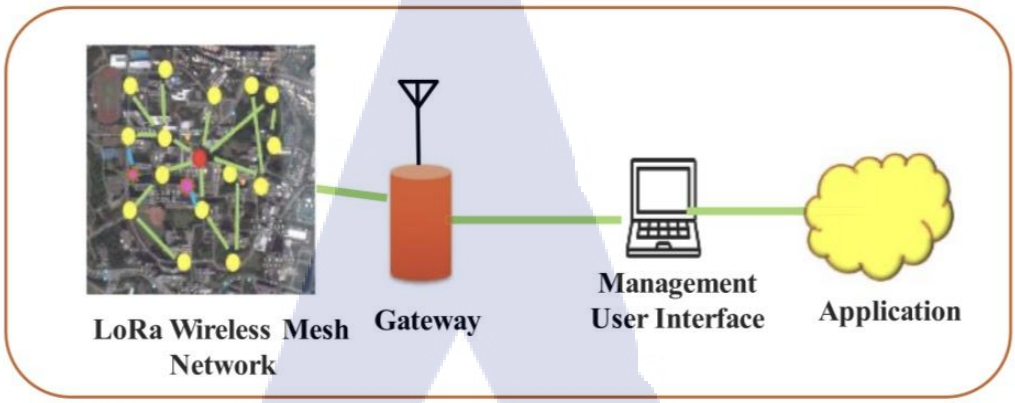


Figure 2.17: The proposed system of LoRa wireless mesh network system

The research indicated that the mesh network could substantially increase packet delivery performance of each sensor without having to install more gateways [27].

Chapter 3
Research Methodology

The monitoring system consists of ESP32 microcontroller, humidity and temperature sensors, PM sensors, LoRa, and Cloud. ESP32 would receive the data (temperature, humidity, and PM) from the sensors via GPIO and send them to the gateway or base station via LoRa, which can be as far as 10 km. The gateway can be built by another ESP32 and LoRa receiver, which would send the data through WiFi or LAN before being saved as CSV format within Cloud Database. Figure 3.1 shows the illustration of the proposed system.

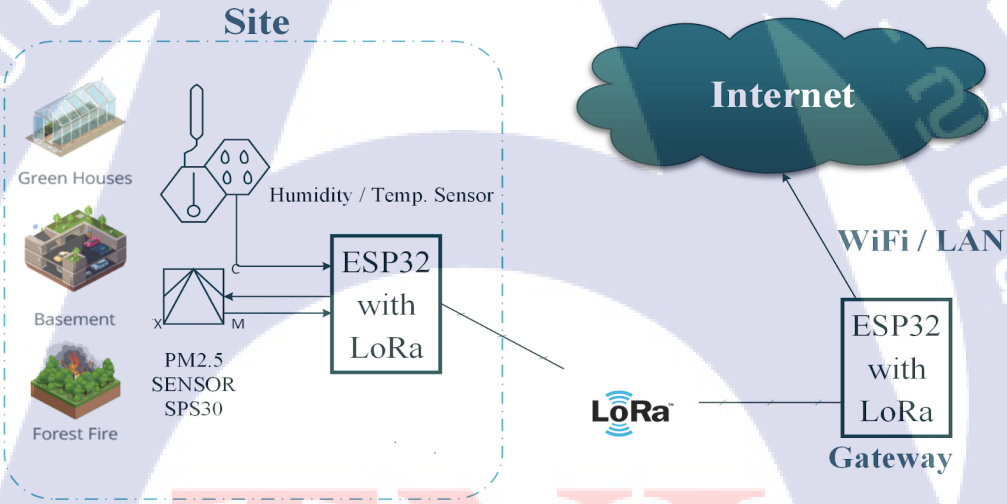


Figure 3.1: Architecture of Proposed System

3.1 ESP32

ESP32 is a microcontroller with integrated Bluetooth, Bluetooth LE, and WiFi. It is selected due to its ability to be utilized in a variety of applications. With 240 MHz, the duo CPU cores can be adjusted to provide a low-power processor. Figure 3.2 shows the photo of ESP32 attached to WiFi LoRa 32.

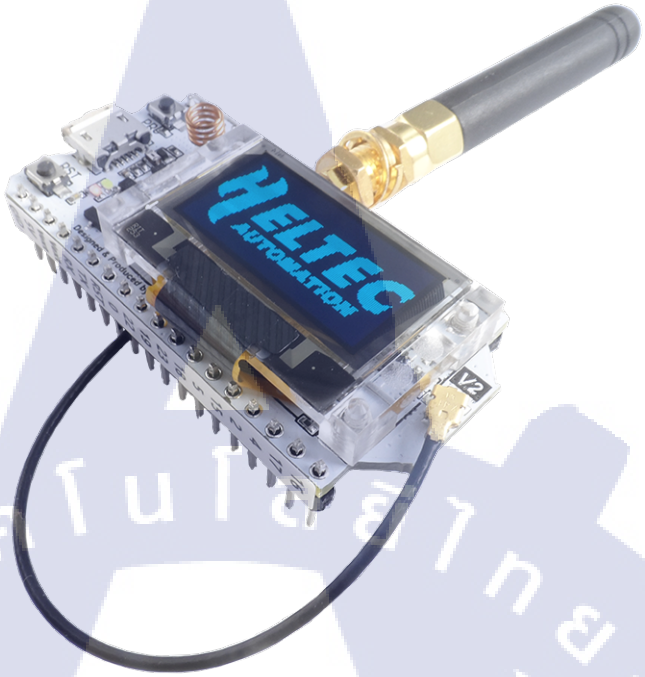


Figure 3.2: ESP32 model HELTEC WiFi LoRa 32 (V2)

3.2 Sensirion SPS30 PM Sensor

SPS30 PM Sensor is developed by the Sensirion company. At the operating conditions of 10-40℃ and 20-80% relative humidity, the SPS30 sensor is designed to measure PM2.5 and PM10 within a range of 0 to 1000 ug/m3. Figure 3.3 shows the particulate matter sensing mechanism of the sensor.

PM2.5 Pin 1 (V-LED) => Microcontroller - 5V

PM2.5 Pin 2 (LED-GND) => Microcontroller - GND Pin

PM2.5 Pin 3 (LED) => Microcontroller - Pin 5

PM2.5 Pin 4 (S-LED) => Microcontroller - GND Pin

PM2.5 Pin 5 (Vo) => Microcontroller – A5 Pin

PM2.5 Pin 6 (Vcc) => Microcontroller - 5V

Amount of PM2.5 in surrounding air, sensed by PM2.5

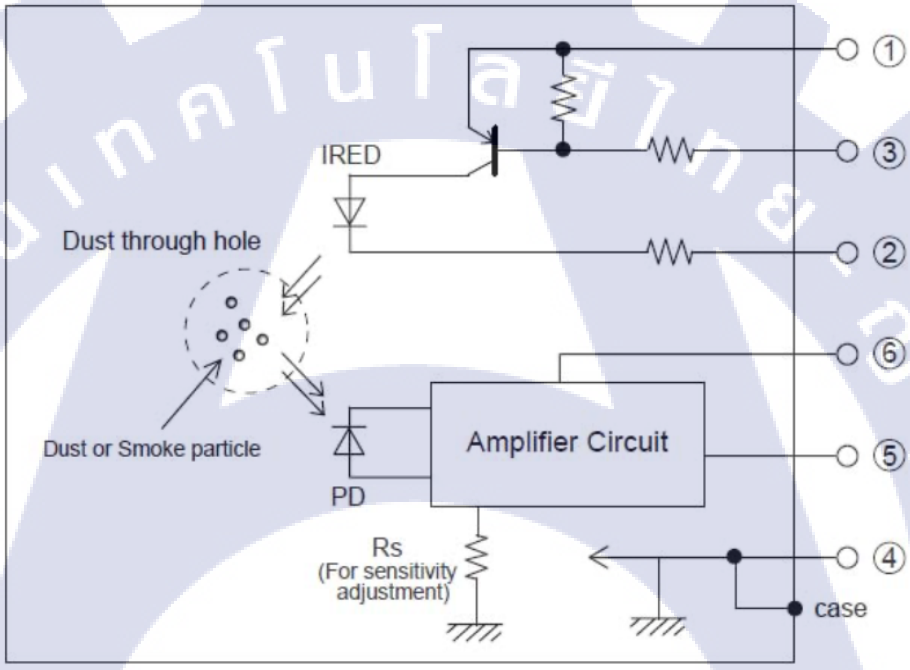


Figure 3.3: Particulate matter sensing mechanism

In the system, the LED emits pulse light which is scattered by dust particles. Then, sensors amplified the value which is measured [28]. Using the analog values with equivalent voltage reference, the voltage equation to calibrate into particulate density (mg/m^3) can be calculated using the equations below:

Equation (3.1): Volt = Analog Value * (3.3 / 1024.0)

Equation (3.2): PM2.5 Density (mg/m3) = Volt * 0.17 - 0.1

3.3 LoRa

LoRa can receive a wide frequency band of 500 and 900 MHz. In this study, a licensed LoRa with the frequency band 433-510 is utilized which would provide the data rate of 980 bps - 21.9 kbps. This research can also be applicable with unlicensed LoRa where the frequency band is 920-925 MHz. LoRa also has other attractive characteristics which are secure data transfer using bidirectional communication and the ability to form simple star network topology. By referring to Figure 2.14, LoRa was chosen over mobile cellular as the study prioritizes long range and low battery consumption over high data rate.

Presently in Thailand, digital technology is on the rise where IoT is integrated in many household appliances in order to send data to users. Consequently, the need to find support for such network services in Thailand continues to increase. One of the network service providers in Thailand called CAT Telecom Public Company Limited (CAT) has already considered this demand, which prompted them to introduce LoRa Network technology to the country as it also supports IoT. This service is implemented under the name "LoRa IoT by CAT". According to the most recent update by the National Broadcasting and Telecommunications Commission (NBTC), LoRa with the frequency of 920-925 MHz with Equivalent Isotropically Radiated Power (EIRP) no higher than 4 W is allowed to be used publicly. In addition, the equipment cannot be Radio Frequency Identification (RFID). Table 3.1 illustrates the unlicensed band for IoT equipment that is allowed in Thailand.

Table 3.1: Unlicensed Band for IoT equipment in Thailand

Frequency Band	**EIRP**
13.553 - 13.567 MHz	10 mW
26.965 - 27.405 MHz	100 mW
30 - 50 MHz	10 mW
54 - 74 MHz	10 mW
300 - 500 MHz	10 mW
2400 - 2500 MHz	100 mW
5150 - 5350 MHz	200 mW
5470 - 5850 MHz	1 W

LoRaWAN is MAC (media access control) protocol specifically for WAN, which is designed to integrate low-powered and long range communication with wireless internet applications.

The connection of LoRaWAN resides between Layer 2 and 3 (Data-Link Layer and Network Layer, respectively) of OSI 7 Layer Model. Additionally, either Proprietary Spread Spectrum technology developed by Semtech Corporation and FSK modulation is used to modulate LoRaWAN. These bands can be employed in public sectors, which is known as industrial, scientific and medical (ISM) bands. The illustration of OSI 7 Layer Model is shown in Figure 3.4. The standard protocol and regulations of LoRaWAN are set by LoRa Alliance which can be found in their website.

<table>
<tr><td colspan="3">Application</td></tr>
<tr><td colspan="3">LoRa MAC</td></tr>
<tr><td colspan="3">MAC Options</td></tr>
<tr><td>Class A</td><td>Class B</td><td>Class C</td></tr>
<tr><td colspan="3">LoRa Modulation</td></tr>
<tr><td colspan="3">Regional ISM Band</td></tr>
</table>

Figure 3.4: OSI 7 Layer Model for LoRaWAN

The architecture of the proposed system from Figure 3.3 can be enhanced to LoRaWAN which contains more than one node in order to collect data from many sites. Figure 3.5 illustrates the proposed network where the system can obtain data from a wide area.

3.4 Blynk

To monitor PM value, temperature and humidity, Blynk is one of IoT platform applications which can be used to connect to any sensors and microcontroller such as ESP32, ESP8266, Arduino, or Raspberry Pi via USB or WiFi. It is easy to build the UI dashboard by drag-n-drop on smart devices. The sensor can be controlled by a variety of UI widgets while the data are visualized and monitored real-time. The data collected can be stored using Blynk Cloud and can be accessed by both iOS and Android.

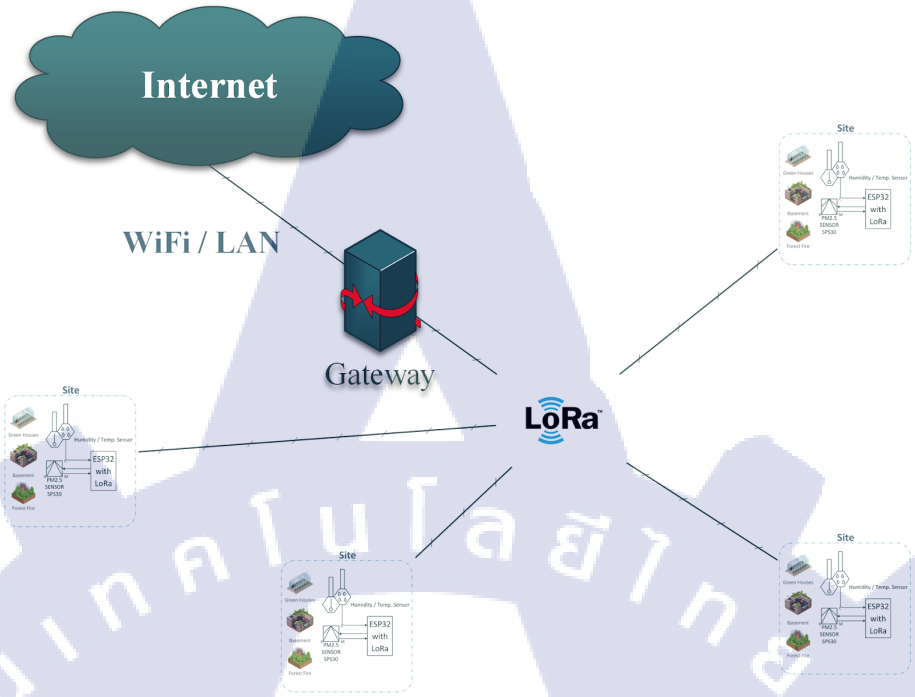


Figure 3.5: Structure of the Proposed Network System (LoRaWAN)

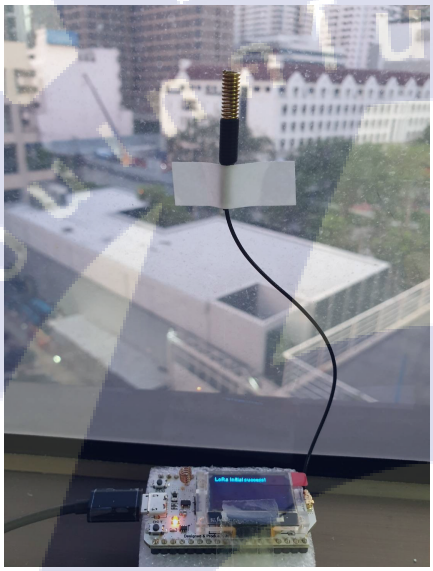
3.5 GanttChart

Processing	Months (in week 1-4)								
	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20
Initial Process									
Thesis Topic									
Literature Review									
Draft Methods									
Thesis Porposal									
Thesis Porposal Defence									
Intermediate Procress									
Implement									
Data Collection									
Draft Findings									
Final Process									
Revisions									
Conclusion									
Final Thesis Defence									

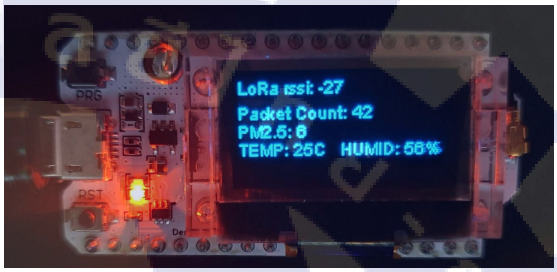
Figure 3.6: Gantt Chart

Chapter 4
Results and Discussion

When all devices on site are connected, PM2.5, temperature and humidity sensors will send all measured data at real-time to ESP32 and show them on the LED display. On the display, LoRa signal strength and data packet can also be observed, then the data will be sent to ESP32-LoRa gateway as illustrated in Figure 4.1.



(a)



(b)

Figure 4.1: The installation of ESP32 with LoRa (a), ESP32 with LoRa in operation (b)

The diagram of ESP32 with LoRa node sensor is illustrated in Figure 4.2A and B. After connecting to the USB power line, ESP32 is ready to operate by sending 5V power (red line) to VCC of DHT11 sensor which is also connected to GND (black line). Then, the sensor will output the data (green line) and send them to ESP32 through the 19th port. Simultaneously, the PM sensor SPS30 will receive an order at set intervals from the 16th port to SCL/RX (purple line). Then, the data will be sent back to the

microcontroller from SDA/TX to the 17th port (orange line). The Select port (in yellow) can be used to determine the interface between UART and I2C.

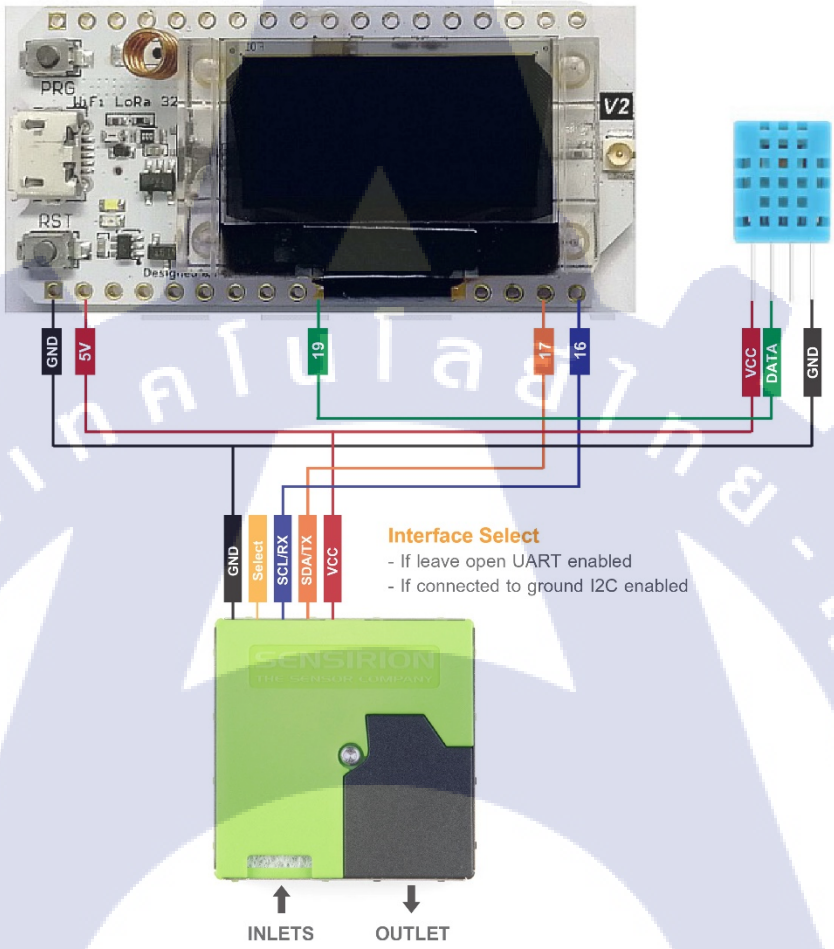


Figure 4.2A: Diagram of ESP32 with LoRa node sensor

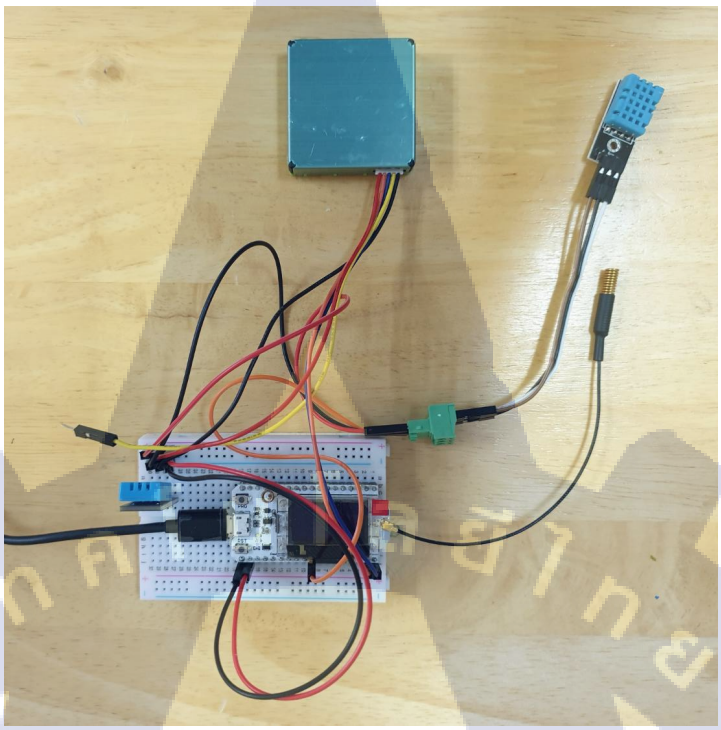


Figure 4.2B: Actual picture of ESP32 with LoRa node sensor

In the experiment, the LoRa sensor node and gateway were set up along Soi Langsuan. The gateway was installed on the 7th floor of Piya Place Building while the node was placed at every 50 meters from the gateway for a total distance of 400 meters; the node was adjusted to send data to the gateway every 10 seconds. Figure 4.3 shows the bird-eye view of LoRa Propagation Signal Test.

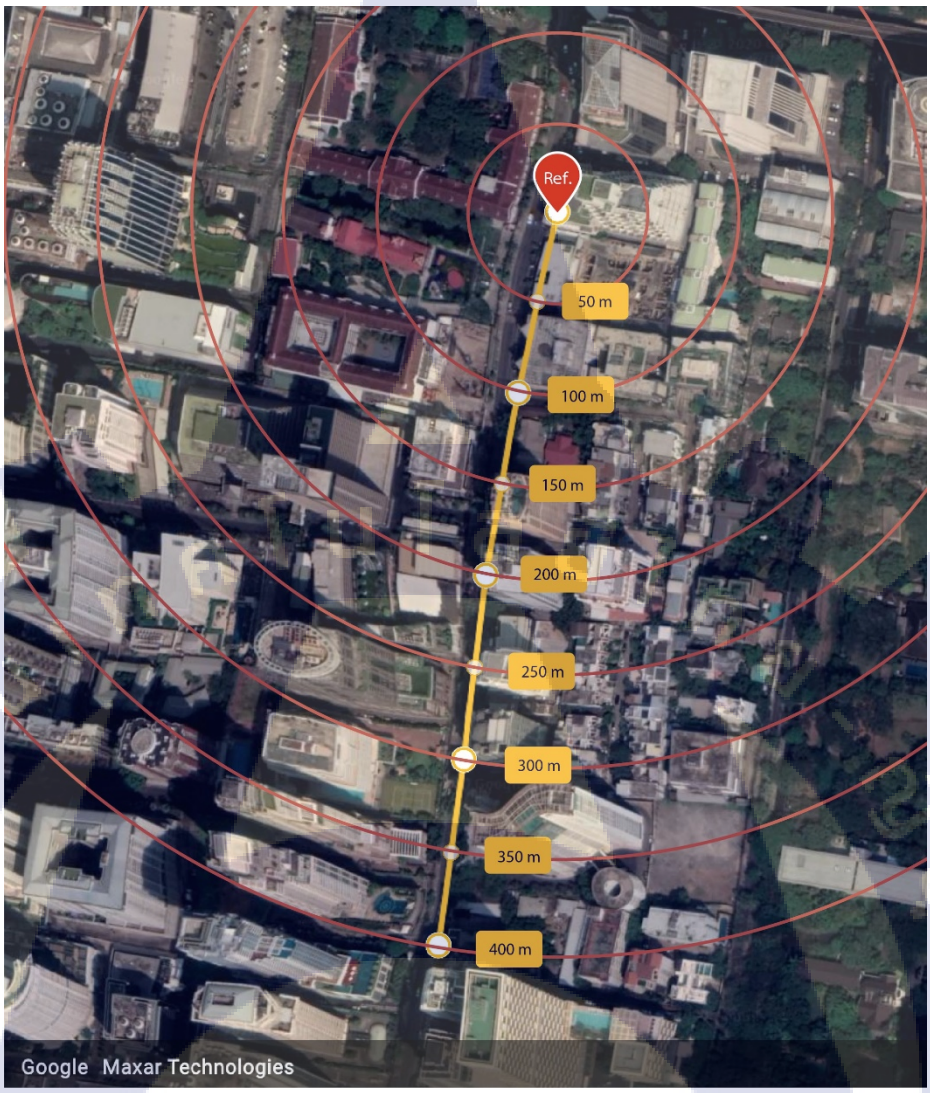


Figure 4.3: LoRa Propagation Signal Test

After the data were collected, the Received Signal Strength Indicator (RSSI) from each marked point was recorded. RSSI indicates the relative quality of the signal received by the gateway, which means that the value is directly proportional to the signal strength. Table 4.1 shows the average RSSI results (in dBm) of each node.

Table 4.1: The average RSSI recorded from each LoRa node

Distance (m)	0	50	100	150	200	250	300	350	400
RSSI (dBm)	-73.95 ±0.94	-108.3 ±6.14	-108.25 ±5.94	-111.15 ±3.79	-118.35 ±2.37	-120.4 ±0.94	-123 ±0	-123 ±0	-123 ±0

According to the table, the RSSI at the gateway was -73.95 dBm which is a comparably strong signal. As the node was placed further away, RSSI value continued to decrease until it approached the constant in which the collection of data could not be achieved. The lowest RSSI reached was -123 dBm starting at the distance of 300 m onward.

The data were averaged and plotted to illustrate the relationship between RSSI and distance. Figure 4.4 illustrates the results with standards of deviation.

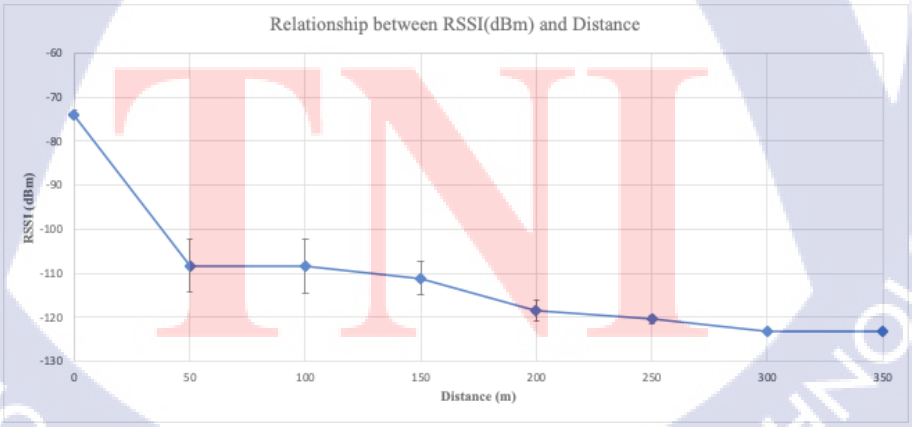


Figure 4.4: RSSI on Receiver form any length of Transmitter

In this experiment, the default spreading factor (SF) was grade 7 which has the bit rate of 5470 bits per second (bps). From the graph, the decrease in RSSI values may be due to several factors. Spreading factor is one of the most significant variables that affect the result. As the distance between the gateway and node increases, it results in higher spreading factor which increases the signal-to-noise ratio (SNR) and thus sensitivity. However, the higher sensitivity lowers the bitrate which contributes to larger energy expenditure. If the grade 12 SF was used, for instance, the bit rate would be notably lowered, 250 bps.

Another element that causes changes of RSSI is obstruction. High-rise buildings and trees may interfere with the signals propagation and reduce signal strength because they can create diffraction. In addition, other signals within the city may cause interference which reduces SNR.

Other factors such as bandwidth, coding rate, and transmission power can also influence RSSI. Higher bandwidth means that the data can be transmitted at a higher rate. However, it also lowers communication range. In regard to coding rate, the large coding rate lowers the probability of interference bursts and errors, but it also increases the packet size which means higher energy consumption. Lastly, transmission power is directly dependent on energy expenditure, but higher transmission power, the lower the SNR. Nevertheless, these factors also depend on configuration. Table 4.2 illustrates the configuration of SF in each grade and its bitrate as well as maximum payload [29].

Table 4.2: The SF configuration for CN470-510 and KR920-923 bands

Data Rate	Configuration	Bit Rate (bps)	Max Payload
DR0	SF12/125kHz	250	59
DR1	SF11/125kHz	440	59
DR2	SF10/125kHz	980	59
DR3	SF9/125kHz	1760	123
DR4	SF8/125kHz	3125	230
DR5	SF7/125kHz	5470	230

From the table, it can be seen that SF at different grades can be configured with the same bandwidth, but the bitrates and maximum payload would be different depending on sensitivity. When SF is grade 7, the bit rate can be as high as 5470 bps. However, the bit rate decreases as the SF grade increases; and the bit rate can be as low as 250 bps when the configuration is set to grade 12.

The gateway is connected to the internet via LoRa and will send the data to Blynk application to present the measured values of PM2.5, PM10, temperature and humidity. Figure 4.5 shows the UI dashboard of Blynk application when it receives the real-time data from the on-site sensors.

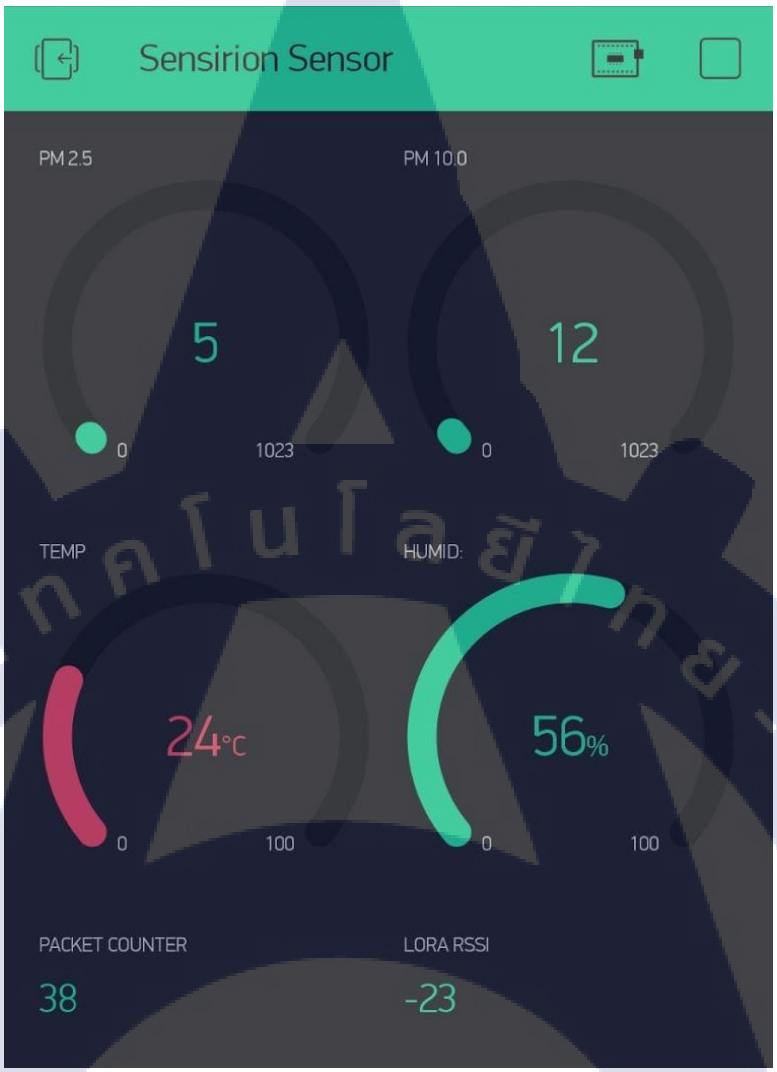


Figure 4.5: Blynk UI dashboard in operation

On the Blynk UI, the data from node sensors including PM2. 5, PM10, temperature, and humidity are shown. The UI also shows the packet counter and LoRa RSSI at the bottom. Blynk UI can also be set to show the data in graph form. Figure 4.6 is an example of Blynk UI when the data were collected within an hour period test for every 10-second interval.

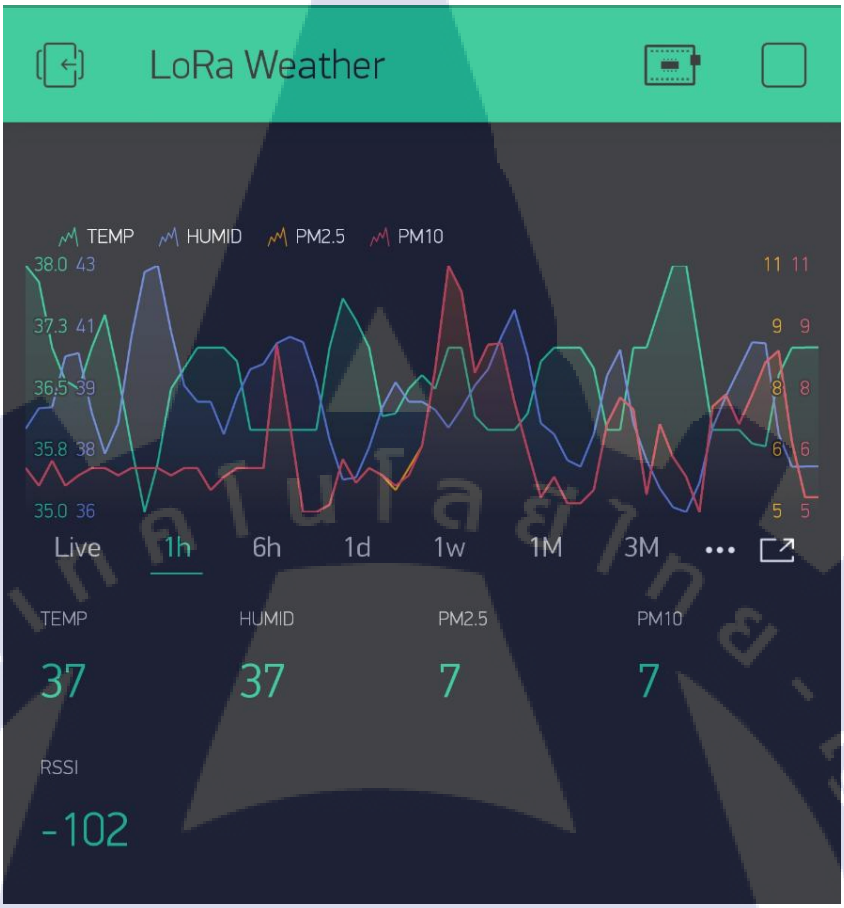


Figure 4.6: Blynk UI after an hour period test for every 10-second interval

After the data were collected for one day, changes can be noted depending on the time within the day. Figure 4.7 depicts Blynk UI after the data were collected for one day.

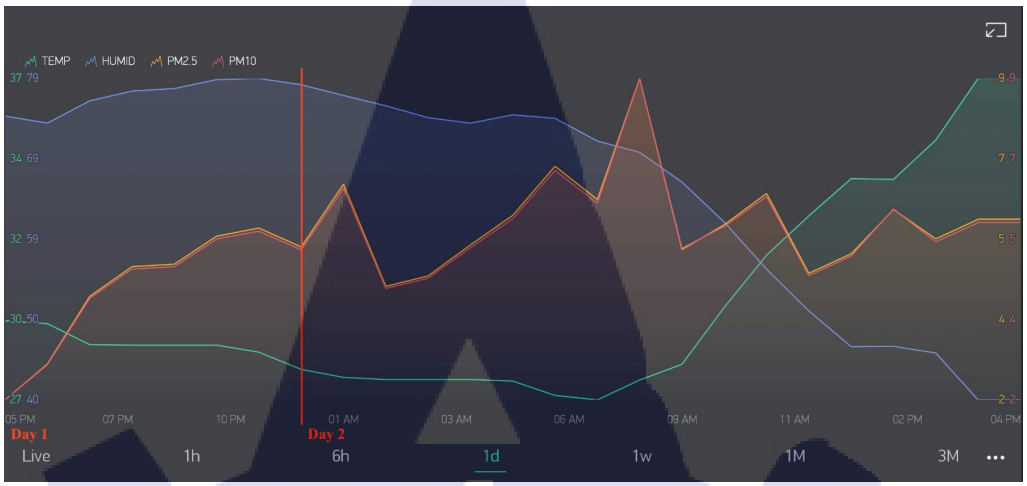


Figure 4.7: Blynk UI after one-day period for every 10-second interval

As can be seen from Figure 4.7, the collection time began at 5 PM of Day 1. On that day, the temperature dropped gradually from 30oC due to the rain and reached the lowest point, 27oC at around 6:30 AM. Then, it climbed constantly to 37oC at 4 PM on Day 2. Humidity graph expressed a different trend as the rain at 5 PM on Day 1 resulted in high humidity (74%) which increased slightly to 79% during the rain. Afterward, it decreased continuously and stayed at about 60% at 2 PM on Day 2. On the other hand, the data of PM2.5 and PM10 showed very similar values. The rain overnight caused the graphs to drop to 2 µg/m3 and fluctuated between 4 to 7 µg/m3. For both PM2.5 and PM10, the peaks occurred at 8 AM on Day 2 where the values were 9 µg/m3. The values of PM2.5 and PM10 can be compared to the standard set by PCD shown in Table 4.3

Table 4.3: Standard of air quality index by Thailand's Pollution Control Department

AQI	Air Quality	PM2.5 [µg/m3]	PM10 [µg/m3]
		Average in 24 hours	
0 - 25	Good	0 - 25	0 - 50
26 - 50	Moderate	26 - 37	51 - 80
51 - 100	Unhealthy for Sensitive Groups	38 - 50	81 - 120
101 - 200	Unhealthy	51 - 90	121 - 180
Over 200	Very Unhealthy	Over 91	Over 181

From the experiment that was carried out for 24 hours, both average values of PM2.5 and PM10 were 5.45 µg/m3, which was considered good according to the PCD standard. Although PM2.5 is a prevalent issue in Thailand, the result indicates otherwise. One plausible explanation is that the experiment was carried out during the rainy season, which means that the rain water may help remove dust particles in the air. The data may have higher values if the experiment is done in other seasons.

Chapter 5
Conclusion and Future Works

The level of particulate matter 2.5 (PM2.5) in Thailand has increased sharply nowadays. A long-term exposure to PM 2.5 directly affects health in many ways, including lung diseases or plaque deposits in arteries that can eventually lead to cardiovascular abnormalities.

This study successfully created the prototype of the Internet of Things (IoT) and LPWAN combination to detect air quality. The temperature and humidity sensors will send all measured data at real-time to ESP32 and show them on the LED display. The gateway is connected to the Internet via LoRa and will send the data to Blynk application to present the measured values of PM 2.5, PM 10, temperature and humidity.

In the experiment, the Received Signal Strength Indicator (RSSI) of IoT-LPWAN architecture was tested, showing that the optimal RSSI has a distance of no longer than 250 meters. As the node is further away from the gateway, the RSSI value drops. The spreading factor (SF) was one of the main causes since the increase of distance contributes to higher SF, which increases the signal-to-noise ratio (SNR) and receiver sensitivity. The SF used was grade 7 with the bit rate of 5470 bits per second (bps), but it can be enhanced to grade 12 for longer distance. By doing so, the bit rate would be sacrificed to 290 bps. Therefore, SF should be determined based on the type of work.

Other reasons which may reduce SNR include physical obstructions, such as trees and buildings, as well as other signals. They reduce the ratio by creating diffractions which interfere with the signal strength. Moreover, changes in RSSI values can also be due to bandwidth, coding rate, and transmission power. In order to maintain higher bandwidth and thus high data transmission rate, the communication range has to be reduced. Furthermore, the compromise between the coding rate and energy

consumption has to be made because large coding rate makes the packet become more resilient to interference bursts and decoding errors, but it also costs higher energy expenditure. Additionally, higher transmission power can lower SNR, but it costs more energy as a result. Thus, it is necessary to consider these elements prior to implementing gateways and nodes in order to optimize the system's performance.

After the system was installed, the data could be observed on Blynk application where the test period was set to every 10-second interval for 24 hour. From the data, the average values for PM2.5 and PM10 were 5.45 µg/m3. The values were compared to the standard set by PCD which suggested that the air quality during the experiment can be categorized as good. Nevertheless, the numbers may change significantly in other seasons. As this study was conducted in the rainy season, rain water may be responsible for removing dust particles in the air.

In conclusion, this study describes the architecture and implementation framework and protocols to an IoT based air quality management system for a wide-area environment. Future work of this study could be carried out by increasing the number of nodes to cover a wider area. Also, the nodes may be designed into a star topology or mesh network system to improve the RSSI of the system. The development of this prototype may hold a promising aspect in controlling air quality and give rise to progress in the air quality monitoring and management industries.

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Appendices

Appendices A

Node Sensor Code

SENSIRION SPS30 UART Code

Gateway Code

Node Sensor Code:

```
#include "sensirion_uart.h"
#include "sps30.h"
#include <Adafruit_Sensor.h>
#include <DHT.h>
#include <DHT_U.h>
#include "heltec.h"
#define BAND    433E6

#define DHTPIN 19
#define DHTTYPE DHT11
DHT_Unified dht(DHTPIN, DHTTYPE);

void setup() {
  Serial.begin(115200);
  Heltec.begin(true /*DisplayEnable Enable*/, true /*Heltec.LoRa Disable*/, true
/*Serial Enable*/, true /*PABOOST Enable*/, BAND /*long BAND*/);
  LoRa.setSyncWord(0x66); // ranges from 0-0xFF
  LoRa.setTxPower(14,RF_PACONFIG_PASELECT_PABOOST);

  sensirion_uart_open();
  dht.begin();
  sensor_t sensor;
```

```
  dht.temperature().getSensor(&sensor);
  dht.humidity().getSensor(&sensor);

    while (sps30_probe() != 0) {
        Serial.println("probe failed");
        delay(1000);
    }
  // sps30_set_fan_auto_cleaning_interval(60*60);

    /* start measurement and wait for 10s to ensure the sensor has a
     * stable flow and possible remaining particles are cleaned out */
    if (sps30_start_measurement() != 0) {
        Serial.println("error starting measurement");
    }
}

void loop() {
    struct sps30_measurement measurement;
    s16 ret;
    sensors_event_t event;

    while(true) {
        delay(300000); ///// Sampling Time 10s = 10000,1min = 60000*
```

```
ret = sps30_read_measurement(&measurement);


if (ret < 0) {
  Serial.println("read measurement failed");
} else {
    if (SPS_IS_ERR_STATE(ret)) {
      Serial.println("Measurements may not be accurate");
    }else{
       dht.temperature().getEvent(&event);
       float t = event.temperature;
       dht.humidity().getEvent(&event);
       float h = event.relative_humidity;
       float pm1 = measurement.mc_1p0;
       float pm2 = measurement.mc_2p5;
       float pm4 = measurement.mc_4p0;
       float pm10 = measurement.mc_10p0;


       Serial.print("pm1.0 :");Serial.println(pm1);
       Serial.print("pm2.5 :");Serial.println(pm2);
       Serial.print("pm4.0 :");Serial.println(pm4);
       Serial.print("pm10.0 :");Serial.println(pm10);
       Serial.print("Temperature :");Serial.println(t);
       Serial.print("Humidity :");Serial.println(h);
```

```
            String LoRaMessage = String(pm1) + "%" + String(pm2) + "&" +
String(pm10) + "#" + String(t) + "@" + String(h);
            //Send LoRa packet to receiver
            LoRa.beginPacket();
            LoRa.print(LoRaMessage);
            LoRa.endPacket();
//            LoRa.beginPacket();
//            LoRa.print("pm1.0 :"); LoRa.println(pm1);
//            LoRa.print("pm2.5 :"); LoRa.println(pm2);
//            LoRa.print("pm4.0 :"); LoRa.println(pm4);
//            LoRa.print("pm10.0 :"); LoRa.println(pm10);
//            LoRa.print("Temperature :"); LoRa.println(t);
//            LoRa.print("Humidity :"); LoRa.print(h);
//            LoRa.endPacket();
        }
      }
    }
    sps30_stop_measurement();
    sensirion_uart_close();
}
```

SENSIRION SPS30 UART Code:

```
/**
 * Mod By Sonthaya Boonchan @HONEYLab
 * Blog : https://www.jackrobotics.me
 * Website HONEYLab : https://www.honey-lab.com
 **/
/*************************************************/

#include "HardwareSerial.h"
HardwareSerial SERIALDEVICE_SPS30(2);
#define PIN_UART_RX 16
#define PIN_UART_TX 17
/*************************************************/
#include <Arduino.h>
#ifdef __cplusplus
  extern "C" {
#endif
#include "sensirion_arch_config.h"
#define BAUDRATE 115200  // baud rate of SPS30

s16 sensirion_uart_open() {

SERIALDEVICE_SPS30.begin(BAUDRATE,SERIAL_8N1,PIN_UART_RX,PIN_
UART_TX);
```

```
    return 0;
}
s16 sensirion_uart_close() {
    SERIALDEVICE_SPS30.end();
    return 0;
}
s16 sensirion_uart_tx(u16 data_len, const u8 *data) {
    return SERIALDEVICE_SPS30.write(data, data_len);
}
s16 sensirion_uart_rx(u16 max_data_len, u8 *data) {
    s16 i = 0;
    while (SERIALDEVICE_SPS30.available() > 0 && i < max_data_len) {
        data[i] = (u8)SERIALDEVICE_SPS30.read();
        i++;
    }
    return i;
}
void sensirion_sleep_usec(u32 useconds) {
    delay((useconds / 1000) + 1);
}
#ifdef __cplusplus
}
#endif
```

Gateway Code:

```
#include "heltec.h"

#define BAND    433E6


#define BLYNK_PRINT Serial


#include <WiFi.h>

#include <WiFiClient.h>

#include <BlynkSimpleEsp32.h>


char auth[] = "yVc3fglGIQZD57lM4jBW06W3WQqoVlN_";


char ssid[] = "14HAUS"; //WiFi connenction

char pass[] = "thisishaus";


BlynkTimer timer;


int counter = 0;


String loRaMessage;

String temp;

String humid;

String pm1;
```

```
String pm2;
String pm10;


//  Receiver
void onReceive(int packetSize){
//  // read packet
//  char data[packetSize];
//  for (int i = 0; i < packetSize; i++)
//  {
//    data[i]=(char)LoRa.read();
//    //Serial.print((char)LoRa.read());
//  }
//  // print RSSI of packet
//  Serial.println(data);
//  Serial.print("' with RSSI ");
//  Serial.println(LoRa.packetRssi());
   while (LoRa.available()) {
     String LoRaData = LoRa.readString();
     // LoRaData format: pm1 / pm2 & pm10 # t @ h
     Serial.print(LoRaData); // Get readingID, temperature and soil moisture
     int pos1 = LoRaData.indexOf('%');
     int pos2 = LoRaData.indexOf('&');
     int pos3 = LoRaData.indexOf('#');
```

```
    int pos4 = LoRaData.indexOf('@');
    pm1 = LoRaData.substring(0, pos1);
    pm2 = LoRaData.substring(pos1 +1, pos2);
    pm10 = LoRaData.substring(pos2+1, pos3);
    temp = LoRaData.substring(pos3+1, pos4);
    humid = LoRaData.substring(pos4+1, LoRaData.length());
  }
  int rssi = LoRa.packetRssi(); // Get RSSI
  Serial.println(pm1);
  Serial.println(pm2);
  Serial.println(pm10);
  Serial.println(temp);
  Serial.println(humid);
  Serial.println(rssi);
  Blynk.virtualWrite(V2, pm2.toInt());
  Blynk.virtualWrite(V3, pm10.toInt());
  Blynk.virtualWrite(V4, temp.toInt());
  Blynk.virtualWrite(V5, humid.toInt());
  Blynk.virtualWrite(V6, rssi);
}

void setup() {
  //WIFI Kit series V1 not support Vext control
```

```
  Heltec.begin(true /*DisplayEnable Enable*/, true /*Heltec.LoRa Disable*/, true
/*Serial Enable*/, true /*PABOOST Enable*/, BAND /*long BAND*/);
  LoRa.setSyncWord(0x66); // ranges from 0-0xFF
  Serial.begin(115200);
  Blynk.begin(auth, ssid, pass);
  //timer.setInterval(10000L, sendSensor);
}

void loop() {
  // try to parse packet
  // transLoRa();
  int packet = LoRa.parsePacket();
  if (packet){
    onReceive(packet);
  }
  Blynk.run();
  //timer.run();
```

Appendices B

Raw data PM2.5, PM10, Temperature and Humidity (every 10 sec)

Raw data PM2.5, PM10, Temperature and Humidity (every 10 sec)

Time	PM2.5	PM10	Temp	Humd
09:00:10	5.00	5.00	24.00	55.00
09:00:20	6.50	5.00	24.00	55.00
09:00:30	6.00	5.00	24.00	55.00
09:00:40	5.00	4.60	24.00	55.00
09:00:50	4.50	4.60	24.60	55.00
09:01:00	5.00	4.80	25.00	66.00
09:01:10	5.00	4.80	25.00	65.00
09:01:20	4.00	4.67	25.00	63.50
09:01:30	4.80	5.83	25.00	62.00
09:01:40	5.00	5.00	25.00	61.25
09:01:50	5.00	5.00	25.00	63.00
09:02:00	5.00	5.20	25.00	63.50
09:02:10	4.60	5.17	25.00	62.80
09:02:20	4.60	5.00	25.00	60.80
09:02:30	4.80	6.25	24.40	58.60
09:02:40	4.80	6.00	24.00	57.00
09:02:50	4.67	6.00	24.00	57.40
09:03:00	5.83	5.83	24.00	60.33
09:03:10	5.00	6.00	24.00	62.83
09:03:20	5.00	5.60	30.00	62.20
09:03:30	5.20	5.17	30.00	62.00
09:03:40	5.17	5.20	30.00	62.80
09:03:50	5.00	6.00	30.17	62.50
09:04:00	6.25	6.00	30.33	62.00
09:04:10	6.00	5.80	30.60	72.00
09:04:20	6.00	5.50	30.50	71.60
09:04:30	5.83	5.60	30.60	72.00
09:04:40	6.00	6.00	31.00	72.17
09:04:50	5.60	6.00	30.80	72.33
09:05:00	5.17	5.33	30.80	71.60
09:05:10	5.20	5.60	31.00	71.50
09:05:20	6.00	5.33	31.00	71.80
09:05:30	6.00	6.00	31.00	72.17
09:05:40	5.80	5.33	31.00	71.80
09:05:50	5.50	5.50	31.00	71.60

Time	PM2.5	PM10	Temp	Humd
09:06:00	5.60	5.40	31.00	71.67
09:06:10	6.00	5.00	31.00	71.40
09:06:20	6.00	5.20	31.00	71.17
09:06:30	5.33	5.33	31.00	71.00
09:06:40	5.60	5.40	31.00	71.00
09:06:50	5.33	5.33	31.00	71.00
09:07:00	6.00	5.33	31.00	71.00
09:07:10	5.33	5.80	31.00	71.00
09:07:20	5.50	5.50	31.00	71.00
09:07:30	5.40	5.67	31.00	71.00
09:07:40	5.00	7.20	31.00	71.00
09:07:50	5.20	6.00	31.00	71.00
09:08:00	5.33	6.00	31.00	70.60
09:08:10	5.40	7.00	31.00	70.67
09:08:20	5.33	7.00	31.00	70.60
09:08:30	5.33	6.00	30.80	70.17
09:08:40	5.80	6.00	31.00	70.00
09:08:50	5.50	5.00	31.00	70.00
09:09:00	5.67	5.00	32.00	70.33
09:09:10	7.00	5.00	32.00	70.00
09:09:20	6.00	5.00	32.00	72.00
09:09:30	6.00	6.00	32.00	72.00
09:09:40	7.00	6.00	32.00	73.00
09:09:50	7.00	7.00	32.00	73.00
09:10:00	6.00	6.00	32.00	72.00
09:10:10	6.00	7.00	32.00	71.00
09:10:20	5.00	7.00	32.00	71.00
09:10:30	5.00	6.00	32.00	70.00
09:10:40	5.00	7.00	32.00	70.00
09:10:50	5.00	6.00	32.00	69.00
09:11:00	6.00	6.00	32.00	69.00
09:11:10	6.00	5.00	32.00	69.00
09:11:20	7.00	6.00	32.00	69.00
09:11:30	6.00	5.00	32.00	68.00
09:11:40	7.00	6.00	32.00	68.00

Time	PM2.5	PM10	Temp	Humd
09:11:50	7.00	6.00	32.00	68.00
09:12:00	6.00	6.00	32.00	68.00
09:12:10	7.00	6.00	32.00	68.00
09:12:20	6.00	6.00	32.00	68.00
09:12:30	6.00	6.00	32.00	68.00
09:12:40	5.00	6.00	32.00	68.00
09:12:50	6.00	5.00	32.00	68.00
09:13:00	5.00	6.00	32.00	68.00
09:13:10	6.00	5.00	32.00	68.00
09:13:20	6.00	6.00	32.00	68.00
09:13:30	6.00	5.00	32.00	68.00
09:13:40	6.00	8.00	33.00	68.00
09:13:50	6.00	7.00	34.00	67.00
09:14:00	6.00	8.00	34.00	68.00
09:14:10	6.00	10.00	34.00	67.00
09:14:20	5.00	10.00	34.00	68.00
09:14:30	6.00	11.00	34.00	67.00
09:14:40	5.00	12.00	34.00	66.00
09:14:50	6.00	9.00	34.00	65.00
09:15:00	5.00	9.00	34.00	65.00
09:15:10	8.00	12.00	34.00	65.00
09:15:20	7.00	11.00	34.00	65.00
09:15:30	8.00	12.00	34.00	65.00
09:15:40	10.00	12.00	34.00	65.00
09:15:50	10.00	12.00	33.00	65.00
09:16:00	11.00	11.00	33.00	65.00
09:16:10	12.00	12.00	33.00	65.00
09:16:20	9.00	10.00	33.00	65.00
09:16:30	9.00	12.00	33.00	65.00
09:16:40	12.00	13.00	33.00	65.00
09:16:50	11.00	10.00	33.00	65.00
09:17:00	12.00	11.00	33.00	65.00
09:17:10	12.00	12.00	33.00	66.00
09:17:20	12.00	12.00	33.00	66.00
09:17:30	11.00	13.00	33.00	65.00
09:17:40	12.00	14.00	33.00	66.00
09:17:50	10.00	13.00	33.00	66.00
09:18:00	12.00	15.00	33.00	66.00

Time	PM2.5	PM10	Temp	Humd
09:18:10	13.00	15.00	33.00	66.00
09:18:20	10.00	13.00	33.00	65.00
09:18:30	11.00	13.00	33.00	66.00
09:18:40	12.00	12.00	33.00	65.00
09:18:50	12.00	11.00	33.00	65.00
09:19:00	13.00	11.00	33.00	65.00
09:19:10	14.00	11.00	33.00	65.00
09:19:20	13.00	10.00	33.00	65.00
09:19:30	15.00	10.00	33.00	65.00
09:19:40	15.00	9.00	33.00	65.00
09:19:50	13.00	9.00	33.00	65.00
09:20:00	13.00	9.00	33.00	65.00
09:20:10	12.00	9.00	33.00	65.00
09:20:20	11.00	9.00	33.00	65.00
09:20:30	11.00	8.00	33.00	65.00
09:20:40	11.00	7.00	33.00	65.00
09:20:50	10.00	7.00	33.00	64.00
09:21:00	10.00	8.00	33.00	65.00
09:21:10	9.00	7.00	33.00	65.00
09:21:20	9.00	8.00	33.00	64.00
09:21:30	9.00	8.00	33.00	65.00
09:21:40	9.00	8.00	33.00	65.00
09:21:50	9.00	8.00	33.00	64.00
09:22:00	8.00	8.00	33.00	64.00
09:22:10	7.00	8.00	33.00	64.00
09:22:20	7.00	7.00	33.00	64.00
09:22:30	8.00	7.00	33.00	64.00
09:22:40	7.00	8.00	33.00	64.00
09:22:50	8.00	8.00	33.00	64.00
09:23:00	8.00	7.00	33.00	64.00
09:23:10	8.00	7.00	33.00	64.00
09:23:20	8.00	7.00	33.00	64.00
09:23:30	8.00	6.00	33.00	64.00
09:23:40	8.00	6.00	33.00	64.00
09:23:50	7.00	5.00	33.00	63.00
09:24:00	7.00	6.00	33.00	63.00
09:24:10	8.00	5.00	33.00	63.00
09:24:20	8.00	5.00	33.00	63.00

Time	PM2.5	PM10	Temp	Humd
09:24:30	7.00	5.00	33.00	63.00
09:24:40	7.00	6.00	33.00	63.00
09:24:50	7.00	6.00	34.00	63.00
09:25:00	6.00	5.00	33.00	63.00
09:25:10	6.00	8.00	33.00	62.00
09:25:20	5.00	6.00	33.00	62.00
09:25:30	6.00	5.00	33.00	61.00
09:25:40	5.00	6.00	34.00	61.00
09:25:50	5.00	5.00	34.00	62.00
09:26:00	5.00	5.00	34.00	61.00
09:26:10	6.00	5.00	34.00	61.00
09:26:20	6.00	5.00	34.00	61.00
09:26:30	5.00	6.00	34.00	61.00
09:26:40	8.00	4.00	34.00	61.00
09:26:50	6.00	5.00	34.00	60.00
09:27:00	5.00	5.00	35.00	60.00
09:27:10	6.00	4.00	35.00	60.00
09:27:20	5.00	4.00	35.00	59.00
09:27:30	5.00	4.00	35.00	59.00
09:27:40	5.00	4.00	35.00	58.00
09:27:50	5.00	4.00	35.00	58.00
09:28:00	6.00	5.00	35.00	58.00
09:28:10	4.00	4.00	35.00	57.00
09:28:20	5.00	4.00	35.00	57.00
09:28:30	5.00	5.00	35.00	56.00
09:28:40	4.00	5.00	35.00	56.00
09:28:50	4.00	5.00	36.00	56.00
09:29:00	4.00	4.00	36.00	56.00
09:29:10	4.00	5.00	36.00	56.00
09:29:20	4.00	6.00	36.00	55.00
09:29:30	5.00	5.00	36.00	55.00
09:29:40	4.00	5.00	36.00	56.00
09:29:50	4.00	5.00	36.00	55.00
09:30:00	5.00	5.00	36.00	55.00
09:30:10	5.00	6.00	37.00	55.00
09:30:20	5.00	6.00	37.00	56.00
09:30:30	4.00	5.00	36.00	56.00
09:30:40	5.00	6.00	36.00	55.00

Time	PM2.5	PM10	Temp	Humd
09:30:50	6.00	6.00	36.00	54.00
09:31:00	5.00	7.00	36.00	54.00
09:31:10	5.00	6.00	36.00	54.00
09:31:20	5.00	7.00	36.00	54.00
09:31:30	5.00	6.00	36.00	55.00
09:31:40	6.00	6.00	37.00	55.00
09:31:50	6.00	7.00	37.00	55.00
09:32:00	5.00	7.00	37.00	55.00
09:32:10	6.00	7.00	37.00	55.00
09:32:20	6.00	8.00	37.00	55.00
09:32:30	7.00	7.00	37.00	54.00
09:32:40	6.00	7.00	37.00	54.00
09:32:50	7.00	7.00	37.00	53.00
09:33:00	6.00	6.00	38.00	53.00
09:33:10	6.00	6.00	38.00	53.00
09:33:20	7.00	6.00	38.00	53.00
09:33:30	7.00	6.00	38.00	53.00
09:33:40	7.00	5.00	38.00	52.00
09:33:50	8.00	6.00	38.00	53.00
09:34:00	7.00	6.00	38.00	53.00
09:34:10	7.00	7.00	38.00	53.00
09:34:20	7.00	7.00	37.00	53.00
09:34:30	6.00	5.00	37.00	53.00
09:34:40	6.00	6.00	37.00	53.00
09:34:50	6.00	5.00	37.00	52.00
09:35:00	6.00	5.00	37.00	53.00
09:35:10	5.00	4.00	38.00	52.00
09:35:20	6.00	5.00	38.00	52.00
09:35:30	6.00	5.00	38.00	52.00
09:35:40	7.00	5.00	38.00	52.00
09:35:50	7.00	7.00	38.00	52.00
09:36:00	5.00	6.00	38.00	52.00
09:36:10	6.00	5.00	38.00	52.00
09:36:20	5.00	4.00	38.00	52.00
09:36:30	5.00	5.00	38.00	52.00
09:36:40	4.00	6.00	37.00	52.00
09:36:50	5.00	6.00	37.00	52.00
09:37:00	5.00	6.00	37.00	52.00

Time	PM2.5	PM10	Temp	Humd
09:37:10	5.00	8.00	37.00	52.00
09:37:20	7.00	8.00	36.00	52.00
09:37:30	6.00	7.00	36.00	51.00
09:37:40	5.00	7.00	36.00	52.00
09:37:50	4.00	8.00	36.00	52.00
09:38:00	5.00	8.00	36.00	52.00
09:38:10	6.00	7.00	36.00	52.00
09:38:20	6.00	7.00	36.00	53.00
09:38:30	6.00	7.00	36.00	53.00
09:38:40	8.00	8.00	36.00	53.00
09:38:50	8.00	9.00	36.00	53.00
09:39:00	7.00	8.00	35.00	54.00
09:39:10	7.00	7.00	35.00	54.00
09:39:20	8.00	8.00	35.00	54.00
09:39:30	8.00	8.00	35.00	54.00
09:39:40	7.00	9.00	35.00	54.00
09:39:50	7.00	8.00	36.00	53.00
09:40:00	7.00	8.00	36.00	53.00
09:40:10	8.00	9.00	36.00	53.00
09:40:20	9.00	11.00	36.00	53.00
09:40:30	8.00	10.00	36.00	53.00
09:40:40	7.00	11.00	36.00	54.00
09:40:50	8.00	8.00	36.00	54.00
09:41:00	8.00	8.00	36.00	54.00
09:41:10	9.00	8.00	36.00	54.00
09:41:20	8.00	8.00	36.00	54.00
09:41:30	8.00	7.00	36.00	54.00
09:41:40	9.00	6.00	36.00	54.00
09:41:50	11.00	7.00	36.00	54.00
09:42:00	10.00	7.00	36.00	53.00
09:42:10	11.00	6.00	36.00	53.00
09:42:20	8.00	4.00	36.00	53.00
09:42:30	8.00	4.00	35.00	53.00
09:42:40	8.00	4.00	35.00	53.00
09:42:50	8.00	5.00	35.00	53.00
09:43:00	7.00	5.00	35.00	54.00
09:43:10	6.00	5.00	35.00	54.00
09:43:20	7.00	5.00	34.00	53.00

Time	PM2.5	PM10	Temp	Humd
09:43:30	7.00	4.00	34.00	53.00
09:43:40	6.00	3.00	34.00	53.00
09:43:50	4.00	3.00	33.00	53.00
09:44:00	4.00	3.00	33.00	55.00
09:44:10	4.00	3.00	33.00	57.00
09:44:20	5.00	3.00	33.00	58.00
09:44:30	5.00	3.00	33.00	59.00
09:44:40	5.00	3.00	33.00	59.00
09:44:50	5.00	2.00	34.00	60.00
09:45:00	4.00	4.00	34.00	60.00
09:45:10	3.00	4.00	34.00	61.00
09:45:20	3.00	2.00	34.00	61.00
09:45:30	3.00	3.00	34.00	60.00
09:45:40	3.00	5.00	34.00	59.00
09:45:50	3.00	3.00	34.00	59.00
09:46:00	3.00	4.00	34.00	59.00
09:46:10	3.00	4.00	34.00	59.00
09:46:20	2.00	4.00	34.00	59.00
09:46:30	4.00	4.00	34.00	59.00
09:46:40	4.00	4.00	34.00	59.00
09:46:50	2.00	4.00	34.00	59.00
09:47:00	3.00	4.00	34.00	59.00
09:47:10	5.00	5.00	33.00	59.00
09:47:20	3.00	5.00	33.00	59.00
09:47:30	4.00	5.00	33.00	59.00
09:47:40	4.00	4.00	32.00	59.00
09:47:50	4.00	5.00	32.00	60.00
09:48:00	4.00	4.00	32.00	60.00
09:48:10	4.00	4.00	32.00	61.00
09:48:20	4.00	4.00	32.00	62.00
09:48:30	4.00	5.00	32.00	61.00
09:48:40	5.00	4.00	32.00	62.00
09:48:50	5.00	4.00	32.00	62.00
09:49:00	5.00	4.00	32.00	62.00
09:49:10	4.00	4.00	32.00	63.00
09:49:20	5.00	5.00	31.00	63.00
09:49:30	4.00	5.00	32.00	63.00
09:49:40	4.00	5.00	31.00	63.00

Time	PM2.5	PM10	Temp	Humd
09:49:50	4.00	5.00	32.00	63.00
09:50:00	5.00	4.00	31.00	64.00
09:50:10	4.00	4.00	31.00	64.00
09:50:20	4.00	9.00	31.00	64.00
09:50:30	4.00	4.00	31.00	64.00
09:50:40	4.00	5.00	31.00	64.00
09:50:50	5.00	4.00	31.00	64.00
09:51:00	5.00	4.00	31.00	64.00
09:51:10	5.00	3.00	31.00	64.00
09:51:20	5.00	4.00	31.00	64.00
09:51:30	4.00	4.00	31.00	65.00
09:51:40	4.00	3.00	31.00	65.00
09:51:50	9.00	3.00	31.00	65.00
09:52:00	4.00	3.00	31.00	65.00
09:52:10	5.00	4.00	31.00	65.00
09:52:20	4.00	4.00	31.00	65.00
09:52:30	4.00	3.00	31.00	65.00
09:52:40	3.00	3.00	31.00	65.00
09:52:50	4.00	3.00	31.00	65.00
09:53:00	4.00	3.00	31.00	65.00
09:53:10	3.00	3.00	31.00	65.00
09:53:20	3.00	2.00	31.00	65.00
09:53:30	3.00	2.00	31.00	65.00
09:53:40	4.00	2.00	32.00	65.00
09:53:50	4.00	2.00	32.00	65.00
09:54:00	3.00	2.00	33.00	65.00
09:54:10	3.00	2.00	33.00	66.00
09:54:20	3.00	3.00	33.00	66.00
09:54:30	3.00	4.00	33.00	65.00
09:54:40	3.00	5.00	33.00	65.00
09:54:50	2.00	4.00	33.00	65.00
09:55:00	2.00	4.00	33.00	65.00
09:55:10	2.00	4.00	32.00	65.00
09:55:20	2.00	4.00	33.00	65.00
09:55:30	2.00	4.00	33.00	66.00
09:55:40	2.00	4.00	32.00	66.00
09:55:50	3.00	4.00	33.00	65.00
09:56:00	4.00	4.00	33.00	65.00

Time	PM2.5	PM10	Temp	Humd
09:56:10	5.00	4.00	32.00	66.00
09:56:20	4.00	5.00	32.00	66.00
09:56:30	4.00	5.00	33.00	66.00
09:56:40	4.00	5.00	33.00	66.00
09:56:50	4.00	4.00	32.00	66.00
09:57:00	4.00	4.00	33.00	66.00
09:57:10	4.00	5.00	32.00	66.00
09:57:20	4.00	4.00	32.00	67.00
09:57:30	4.00	5.00	31.00	67.00
09:57:40	4.00	5.00	31.00	66.00
09:57:50	5.00	5.00	31.00	67.00
09:58:00	5.00	6.00	31.00	66.00
09:58:10	5.00	5.00	31.00	67.00
09:58:20	4.00	5.00	30.00	67.00
09:58:30	4.00	6.00	30.00	68.00
09:58:40	5.00	5.00	30.00	68.00
09:58:50	4.00	5.00	30.00	69.00
09:59:00	5.00	4.00	30.00	69.00
09:59:10	5.00	4.00	30.00	68.00
09:59:20	5.00	5.00	30.00	68.00
09:59:30	6.00	5.00	30.00	68.00
09:59:40	5.00	4.00	30.00	68.00
09:59:50	5.00	5.00	30.00	68.00
10:00:00	6.00	5.00	30.00	69.00
10:00:10	5.00	5.00	30.00	69.00
10:00:20	5.00	5.00	30.00	69.00
10:00:30	4.00	5.00	30.00	70.00
10:00:40	4.00	5.00	30.00	69.00
10:00:50	5.00	5.00	30.00	70.00
10:01:00	5.00	5.00	30.00	70.00
10:01:10	4.00	4.00	30.00	70.00
10:01:20	5.00	4.00	30.00	70.00
10:01:30	5.00	5.00	30.00	70.00
10:01:40	5.00	5.00	30.00	70.00
10:01:50	5.00	5.00	30.00	70.00
10:02:00	5.00	5.00	30.00	70.00
10:02:10	5.00	5.00	30.00	70.00
10:02:20	5.00	5.00	30.00	70.00

Time	PM2.5	PM10	Temp	Humd
10:02:30	5.00	5.00	30.00	70.00
10:02:40	4.00	5.00	30.00	70.00
10:02:50	4.00	6.00	30.00	70.00
10:03:00	5.00	7.00	30.00	70.00
10:03:10	5.00	6.00	30.00	70.00
10:03:20	5.00	7.00	30.00	70.00
10:03:30	5.00	7.00	30.00	70.00
10:03:40	5.00	6.00	31.00	70.00
10:03:50	5.00	6.00	30.00	70.00
10:04:00	5.00	7.00	30.00	70.00
10:04:10	5.00	7.00	31.00	70.00
10:04:20	6.00	7.00	31.00	70.00
10:04:30	7.00	6.00	30.00	71.00
10:04:40	6.00	7.00	30.00	70.00
10:04:50	7.00	6.00	30.00	70.00
10:05:00	7.00	7.00	31.00	71.00
10:05:10	6.00	7.00	30.00	71.00
10:05:20	6.00	7.00	31.00	70.00
10:05:30	7.00	7.00	30.00	70.00
10:05:40	7.00	8.00	30.00	70.00
10:05:50	7.00	7.00	31.00	71.00
10:06:00	6.00	8.00	31.00	70.00
10:06:10	7.00	8.00	31.00	71.00
10:06:20	6.00	8.00	30.00	70.00
10:06:30	7.00	8.00	31.00	70.00
10:06:40	7.00	7.00	31.00	70.00
10:06:50	7.00	8.00	31.00	70.00
10:07:00	7.00	8.00	31.00	70.00
10:07:10	8.00	7.00	30.00	69.00
10:07:20	7.00	8.00	31.00	70.00
10:07:30	8.00	7.00	31.00	70.00
10:07:40	8.00	6.00	31.00	70.00
10:07:50	8.00	7.00	31.00	70.00
10:08:00	8.00	7.00	31.00	69.00
10:08:10	7.00	8.00	31.00	70.00
10:08:20	8.00	8.00	31.00	70.00
10:08:30	8.00	7.00	31.00	70.00
10:08:40	7.00	7.00	31.00	70.00

Time	PM2.5	PM10	Temp	Humd
10:08:50	8.00	8.00	31.00	70.00
10:09:00	7.00	9.00	31.00	70.00
10:09:10	6.00	8.00	31.00	70.00
10:09:20	7.00	8.00	31.00	70.00
10:09:30	7.00	9.00	31.00	69.00
10:09:40	8.00	7.00	31.00	69.00
10:09:50	8.00	7.00	31.00	69.00
10:10:00	7.00	7.00	31.00	69.00
10:10:10	7.00	7.00	31.00	69.00
10:10:20	8.00	8.00	31.00	69.00
10:10:30	9.00	9.00	31.00	69.00
10:10:40	8.00	8.00	31.00	69.00
10:10:50	8.00	7.00	31.00	69.00
10:11:00	9.00	8.00	31.00	69.00
10:11:10	7.00	8.00	32.00	69.00
10:11:20	7.00	9.00	32.00	68.00
10:11:30	7.00	8.00	32.00	68.00
10:11:40	7.00	8.00	32.00	68.00
10:11:50	8.00	7.00	32.00	67.00
10:12:00	9.00	8.00	32.00	67.00
10:12:10	8.00	8.00	32.00	67.00
10:12:20	7.00	9.00	32.00	66.00
10:12:30	8.00	9.00	32.00	66.00
10:12:40	8.00	8.00	32.00	66.00
10:12:50	9.00	6.00	33.00	66.00
10:13:00	8.00	8.00	33.00	65.00
10:13:10	8.00	7.00	33.00	65.00
10:13:20	7.00	6.00	33.00	65.00
10:13:30	8.00	7.00	33.00	65.00
10:13:40	8.00	7.00	33.00	65.00
10:13:50	9.00	7.00	33.00	65.00
10:14:00	9.00	6.00	33.00	65.00
10:14:10	8.00	6.00	33.00	65.00
10:14:20	6.00	5.00	34.00	64.00
10:14:30	8.00	7.00	34.00	64.00
10:14:40	7.00	7.00	34.00	64.00
10:14:50	6.00	9.00	34.00	63.00
10:15:00	7.00	7.00	34.00	62.00

Time	PM2.5	PM10	Temp	Humd
10:15:10	7.00	8.00	34.00	62.00
10:15:20	7.00	7.00	34.00	62.00
10:15:30	6.00	7.00	34.00	62.00
10:15:40	6.00	7.00	34.00	62.00
10:15:50	5.00	7.00	35.00	62.00
10:16:00	7.00	6.00	35.00	61.00
10:16:10	7.00	9.00	35.00	61.00
10:16:20	9.00	17.00	36.00	61.00
10:16:30	7.00	8.00	36.00	60.00
10:16:40	8.00	6.00	36.00	59.00
10:16:50	7.00	3.00	36.00	59.00
10:17:00	7.00	3.00	36.00	58.00
10:17:10	7.00	3.00	36.00	58.00
10:17:20	7.00	3.00	36.00	58.00
10:17:30	6.00	3.00	36.00	58.00
10:17:40	9.00	2.00	27.00	58.00
10:17:50	10.00	2.00	28.00	58.00
10:18:00	8.00	3.00	28.00	58.00
10:18:10	6.00	3.00	28.00	57.00
10:18:20	3.00	2.00	28.00	57.00
10:18:30	3.00	3.00	28.00	70.00
10:18:40	3.00	3.00	28.00	66.00
10:18:50	3.00	3.00	28.00	68.00
10:19:00	3.00	3.00	28.00	66.00
10:19:10	2.00	3.00	28.00	68.00
10:19:20	2.00	3.50	28.00	68.00
10:19:30	3.00	3.17	28.00	67.00
10:19:40	3.00	3.17	28.00	67.00
10:19:50	2.00	3.00	28.00	67.00
10:20:00	3.00	2.83	28.00	67.00
10:20:10	3.00	3.60	28.00	66.00
10:20:20	3.00	3.00	28.00	67.00
10:20:30	3.00	3.00	28.00	65.00
10:20:40	3.00	3.00	28.00	67.00
10:20:50	3.50	3.00	27.67	68.00
10:21:00	3.17	3.33	27.00	68.75
10:21:10	3.17	3.00	27.00	69.00
10:21:20	3.00	3.40	27.00	69.00

Time	PM2.5	PM10	Temp	Humd
10:21:30	2.83	3.67	27.50	66.00
10:21:40	3.60	3.00	28.00	63.33
10:21:50	3.00	3.00	28.00	60.80
10:22:00	3.00	3.00	28.00	63.33
10:22:10	3.00	3.00	28.20	66.00
10:22:20	3.00	3.00	28.00	67.33
10:22:30	3.33	3.20	28.00	68.40
10:22:40	3.00	3.80	27.33	69.00
10:22:50	3.40	3.20	27.00	69.00
10:23:00	3.67	3.20	27.17	69.40
10:23:10	3.00	3.00	28.00	67.17
10:23:20	3.00	3.00	28.00	64.00
10:23:30	3.00	3.00	28.00	61.00
10:23:40	3.00	2.80	28.80	62.25
10:23:50	3.00	3.00	29.00	65.50
10:24:00	3.20	3.00	29.00	67.33
10:24:10	3.80	3.00	29.00	68.00
10:24:20	3.20	3.00	29.00	68.00
10:24:30	3.20	3.00	29.00	69.40
10:24:40	3.00	3.17	29.00	69.20
10:24:50	3.00	3.00	29.00	69.60
10:25:00	3.00	3.00	29.00	69.00
10:25:10	2.80	2.80	29.20	68.83
10:25:20	3.00	2.83	29.50	68.60
10:25:30	3.00	3.00	29.50	68.00
10:25:40	3.00	3.00	29.00	68.00
10:25:50	3.00	3.00	29.00	68.00
10:26:00	3.00	3.00	29.60	68.00
10:26:10	3.17	2.60	29.83	68.00
10:26:20	3.00	3.00	29.60	67.67
10:26:30	3.00	3.00	29.83	67.00
10:26:40	2.80	3.00	29.60	67.50
10:26:50	2.83	3.17	29.83	68.00
10:27:00	3.00	3.00	30.00	68.00
10:27:10	3.00	3.00	30.00	68.00
10:27:20	3.00	3.00	30.00	69.00
10:27:30	3.00	3.00	30.00	69.00
10:27:40	2.60	3.00	30.00	69.33

Time	PM2.5	PM10	Temp	Humd
10:27:50	3.00	3.00	30.00	70.00
10:28:00	3.00	3.00	30.00	70.00
10:28:10	3.00	3.00	30.00	70.00
10:28:20	3.17	2.83	30.00	71.00
10:28:30	3.00	2.17	30.00	71.00
10:28:40	3.00	3.00	30.00	71.00
10:28:50	3.00	2.83	30.00	71.00
10:29:00	3.00	2.80	30.00	71.33
10:29:10	3.00	3.00	30.00	71.75
10:29:20	3.00	3.00	30.00	72.00
10:29:30	3.00	3.00	29.80	71.60
10:29:40	3.00	3.00	29.33	71.83
10:29:50	2.83	3.25	29.40	71.50
10:30:00	2.17	3.00	29.50	67.00
10:30:10	3.00	3.00	29.50	62.67
10:30:20	2.83	3.17	29.17	61.40
10:30:30	2.80	3.40	29.17	64.17
10:30:40	3.00	3.00	29.00	66.40
10:30:50	3.00	3.00	29.33	67.50
10:31:00	3.00	3.00	29.20	68.00
10:31:10	3.00	3.00	29.00	68.83
10:31:20	3.25	3.00	29.20	69.67
10:31:30	3.00	3.00	29.00	70.00
10:31:40	3.00	3.00	29.40	69.17
10:31:50	3.17	3.00	30.00	69.00
10:32:00	3.40	3.00	30.00	69.00
10:32:10	3.00	3.00	29.80	69.00
10:32:20	3.00	3.00	30.00	69.00
10:32:30	3.00	3.00	30.00	68.20
10:32:40	3.00	3.00	30.00	68.00
10:32:50	3.00	3.00	30.00	67.50
10:33:00	3.00	3.00	30.00	67.00
10:33:10	3.00	3.20	30.00	67.00
10:33:20	3.00	2.83	30.00	67.00
10:33:30	3.00	3.00	30.00	67.00
10:33:40	3.00	3.00	30.00	67.00
10:33:50	3.00	3.00	29.67	67.00
10:34:00	3.00	3.00	29.20	66.20

Time	PM2.5	PM10	Temp	Humd
10:34:10	3.00	3.00	29.00	65.50
10:34:20	3.00	3.00	29.20	64.50
10:34:30	3.00	3.00	29.40	61.20
10:34:40	3.20	3.00	29.00	58.33
10:34:50	2.83	3.00	29.00	58.20
10:35:00	3.00	2.83	29.17	60.83
10:35:10	3.00	3.00	29.00	63.20
10:35:20	3.00	3.00	29.33	64.60
10:35:30	3.00	3.00	29.60	66.00
10:35:40	3.00	2.80	29.67	66.80
10:35:50	3.00	3.00	30.00	67.83
10:36:00	3.00	3.00	30.00	68.00
10:36:10	3.00	2.80	30.00	68.67
10:36:20	3.00	2.67	30.00	69.00
10:36:30	2.83	2.67	30.00	69.00
10:36:40	3.00	3.00	30.00	68.83
10:36:50	3.00	3.00	30.00	69.00
10:37:00	3.00	3.00	30.00	69.00
10:37:10	2.80	2.83	30.00	69.20
10:37:20	3.00	3.00	30.00	69.00
10:37:30	3.00	2.50	30.00	69.25
10:37:40	2.67	2.50	30.00	69.83
10:37:50	2.80	3.00	29.20	69.40
10:38:00	2.67	2.67	29.33	70.17
10:38:10	3.00	2.40	29.20	68.83
10:38:20	3.00	2.17	29.17	65.00
10:38:30	3.00	2.40	29.17	61.67
10:38:40	2.83	2.50	29.60	61.00
10:38:50	3.00	2.40	29.50	63.67
10:39:00	2.50	2.67	30.00	65.60
10:39:10	2.50	3.00	29.67	66.67
10:39:20	3.00	3.00	30.00	67.83
10:39:30	2.67	2.83	30.00	68.40
10:39:40	2.40	2.60	30.00	69.17
10:39:50	2.17	2.50	30.00	70.00
10:40:00	2.40	2.25	30.00	70.17
10:40:10	2.50	3.00	30.00	71.00
10:40:20	2.40	2.17	30.00	71.00

Time	PM2.5	PM10	Temp	Humd
10:40:30	2.67	2.20	30.00	71.00
10:40:40	3.00	2.50	30.00	71.00
10:40:50	3.00	3.00	30.00	71.17
10:41:00	2.83	2.50	30.00	71.00
10:41:10	2.60	2.60	30.00	71.00
10:41:20	2.50	2.50	30.00	71.00
10:41:30	2.25	2.33	30.00	71.00
10:41:40	3.00	2.20	29.80	71.00
10:41:50	2.17	2.17	29.17	71.00
10:42:00	2.20	2.40	29.60	69.67
10:42:10	2.50	2.17	29.67	66.00
10:42:20	3.00	2.20	29.50	62.17
10:42:30	2.50	2.33	29.80	61.60
10:42:40	2.60	2.40	30.00	64.50
10:42:50	2.50	2.00	29.80	66.40
10:43:00	2.33	2.67	30.00	67.50
10:43:10	2.20	2.80	30.00	68.83
10:43:20	2.17	2.80	30.00	69.80
10:43:30	2.40	2.00	30.00	70.17
10:43:40	2.17	3.00	30.00	71.00
10:43:50	2.20	2.80	30.00	71.17
10:44:00	2.33	2.20	29.60	72.00
10:44:10	2.40	2.60	29.00	72.00
10:44:20	2.00	3.00	29.00	72.00
10:44:30	2.67	3.00	29.00	71.33
10:44:40	2.80	3.00	29.00	66.17
10:44:50	2.80	3.00	29.00	61.20
10:45:00	2.00	2.20	29.00	58.60
10:45:10	3.00	2.33	29.00	56.60
10:45:20	2.80	2.00	29.00	59.17
10:45:30	2.20	2.20	28.80	62.20
10:45:40	2.60	3.00	28.00	64.00
10:45:50	3.00	3.00	28.40	65.60
10:46:00	3.00	2.67	28.33	64.00
10:46:10	3.00	2.60	28.17	60.83
10:46:20	3.00	2.00	28.80	57.80
10:46:30	2.20	2.67	29.00	58.33
10:46:40	2.33	3.00	28.80	62.20

Time	PM2.5	PM10	Temp	Humd
10:46:50	2.00	2.83	29.00	64.17
10:47:00	2.20	2.80	29.00	65.67
10:47:10	3.00	2.17	28.67	67.40
10:47:20	3.00	3.00	28.17	68.17
10:47:30	2.67	3.00	28.20	68.80
10:47:40	2.60	3.00	29.00	68.00
10:47:50	2.00	2.60	29.00	64.00
10:48:00	2.67	2.83	29.00	60.50
10:48:10	3.00	2.00	29.00	60.00
10:48:20	2.83	2.50	29.00	63.17
10:48:30	2.80	2.80	29.00	65.83
10:48:40	2.17	3.00	29.00	66.60
10:48:50	3.00	3.00	28.83	67.83
10:49:00	3.00	3.00	29.00	68.80
10:49:10	3.00	3.00	29.00	69.00
10:49:20	2.60	3.00	29.00	66.80
10:49:30	2.83	2.50	29.00	62.60
10:49:40	2.00	3.00	29.00	59.67
10:49:50	2.50	3.00	28.83	61.00
10:50:00	2.80	3.00	28.80	63.83
10:50:10	3.00	2.80	28.60	65.40
10:50:20	3.00	3.00	28.33	66.67
10:50:30	3.00	3.00	28.67	67.40
10:50:40	3.00	3.00	28.67	67.67
10:50:50	3.00	3.00	28.00	67.80
10:51:00	2.50	3.17	28.20	67.60
10:51:10	3.00	3.00	28.00	66.33
10:51:20	3.00	3.00	28.00	66.67
10:51:30	3.00	3.00	28.00	64.83
10:51:40	2.80	3.00	28.00	61.00
10:51:50	3.00	3.00	28.00	58.60
10:52:00	3.00	3.00	28.00	60.00
10:52:10	3.00	3.00	28.00	58.20
10:52:20	3.00	3.00	28.00	57.20
10:52:30	3.17	3.00	28.83	61.25
10:52:40	3.00	3.00	29.00	64.17
10:52:50	3.00	3.00	29.00	65.40
10:53:00	3.00	3.00	29.67	66.17

Time	PM2.5	PM10	Temp	Humd
10:53:10	3.00	3.00	30.00	61.60
10:53:20	3.00	2.80	30.00	60.50
10:53:30	3.00	3.00	30.00	58.67
10:53:40	3.00	3.00	30.00	58.00
10:53:50	3.00	3.20	30.00	57.50
10:54:00	3.00	3.00	30.00	57.00
10:54:10	3.00	3.00	30.00	57.00
10:54:20	3.00	3.00	30.00	56.40
10:54:30	3.00	3.00	30.00	56.00
10:54:40	3.00	3.00	30.00	56.00
10:54:50	2.80	3.00	30.00	56.20
10:55:00	3.00	3.00	30.00	56.80
10:55:10	3.00	3.00	30.00	56.60
10:55:20	3.20	2.80	30.00	56.00
10:55:30	3.00	3.00	30.00	56.00
10:55:40	3.00	3.00	30.00	56.00
10:55:50	3.00	3.40	30.00	56.00
10:56:00	3.00	5.00	30.00	56.00
10:56:10	3.00	5.20	30.00	56.00
10:56:20	3.00	5.00	30.00	56.80
10:56:30	2.67	4.00	29.20	57.00
10:56:40	3.00	5.00	29.20	59.00
10:56:50	2.80	4.00	30.00	60.67
10:57:00	3.00	4.00	30.40	58.60
10:57:10	3.00	2.67	31.00	57.00
10:57:20	3.40	3.00	31.00	55.40
10:57:30	5.00	3.00	32.00	55.40
10:57:40	5.20	3.50	32.00	68.00
10:57:50	5.00	4.00	33.00	71.00
10:58:00	4.00	4.00	22.00	71.00
10:58:10	5.00	3.00	33.00	70.50
10:58:20	4.00	3.33	33.00	69.00
10:58:30	4.00	3.33	33.00	68.00
10:58:40	2.67	3.67	33.00	66.00
10:58:50	3.00	11.20	33.00	44.00
10:59:00	3.00	6.17	33.00	66.00
10:59:10	3.50	3.67	33.00	66.00
10:59:20	4.00	4.00	33.00	66.00

Time	PM2.5	PM10	Temp	Humd
10:59:30	4.00	3.50	33.00	66.00
10:59:40	3.00	3.00	33.00	66.00
10:59:50	3.33	3.00	33.00	65.50
11:00:00	3.33	3.00	33.00	64.33
11:00:10	3.67	3.00	33.00	64.00
11:00:20	11.20	3.00	33.00	64.00
11:00:30	6.17	3.00	33.00	63.00
11:00:40	3.67	3.00	32.80	64.00
11:00:50	4.00	3.00	32.00	64.00
11:01:00	3.50	3.20	32.00	64.00
11:01:10	3.00	3.33	32.00	63.25
11:01:20	3.00	3.00	32.00	56.17
11:01:30	3.00	3.00	31.25	54.40
11:01:40	3.00	3.00	31.00	54.67
11:01:50	3.00	3.20	31.00	56.25
11:02:00	3.00	2.67	31.00	57.17
11:02:10	3.00	3.00	31.00	57.00
11:02:20	3.00	3.00	31.00	54.75
11:02:30	3.20	3.00	31.00	54.33
11:02:40	3.33	2.83	30.40	56.20
11:02:50	3.00	3.00	30.17	58.33
11:03:00	3.00	3.00	30.00	59.80
11:03:10	3.00	3.00	30.00	59.67
11:03:20	3.20	2.80	30.00	57.67
11:03:30	2.67	3.00	30.00	55.00
11:03:40	3.00	3.00	30.00	53.67
11:03:50	3.00	3.00	30.00	53.00
11:04:00	3.00	3.00	29.50	53.00
11:04:10	2.83	3.00	29.00	53.00
11:04:20	3.00	3.17	29.00	53.00
11:04:30	3.00	4.00	29.00	53.00
11:04:40	3.00	4.00	27.00	53.00
11:04:50	2.80	4.20	28.00	54.00
11:05:00	3.00	5.00	27.80	54.00
11:05:10	3.00	4.40	28.00	54.00
11:05:20	3.00	5.00	28.00	54.00
11:05:30	3.00	5.00	28.00	67.00
11:05:40	3.00	4.33	28.00	66.00

Time	PM2.5	PM10	Temp	Humd
11:05:50	3.17	4.50	28.00	65.80
11:06:00	4.00	4.80	28.00	67.33
11:06:10	4.00	4.33	28.00	79.25
11:06:20	4.20	4.60	28.00	81.17
11:06:30	5.00	5.00	28.00	82.60
11:06:40	4.40	5.60	28.00	83.33
11:06:50	5.00	5.33	28.00	84.00
11:07:00	5.00	6.40	28.00	84.00
11:07:10	4.33	6.00	28.00	84.40
11:07:20	4.50	6.00	28.00	85.00
11:07:30	4.80	5.40	28.00	85.00
11:07:40	4.33	6.00	28.00	84.80
11:07:50	4.60	6.00	28.00	85.00
11:08:00	5.00	5.83	28.00	85.00
11:08:10	5.60	5.40	28.00	85.50
11:08:20	5.33	5.50	28.00	86.00
11:08:30	6.33	6.17	28.00	86.33
11:08:40	6.00	5.40	27.80	86.80
11:08:50	6.00	5.33	27.50	86.50
11:09:00	5.40	5.80	27.40	86.67
11:09:10	6.00	5.33	27.33	87.00
11:09:20	6.00	5.75	27.50	86.60
11:09:30	5.83	5.60	28.00	85.80
11:09:40	5.40	6.00	27.83	85.33
11:09:50	5.50	5.80	28.00	85.20
11:10:00	6.17	5.50	28.00	84.17
11:10:10	5.40	6.40	28.00	84.50
11:10:20	5.33	6.00	28.00	85.00
11:10:30	5.80	6.20	28.00	84.17
11:10:40	5.33	6.00	28.00	84.00
11:10:50	5.75	6.00	28.00	84.00
11:11:00	5.60	6.00	28.00	84.00
11:11:10	6.00	6.17	28.00	84.00
11:11:20	5.80	6.00	28.00	83.75
11:11:30	5.50	5.83	27.83	84.00
11:11:40	6.40	5.80	27.80	84.00
11:11:50	6.00	6.17	28.00	84.80
11:12:00	6.20	6.25	28.00	85.00

Time	PM2.5	PM10	Temp	Humd
11:12:10	6.00	6.00	27.60	85.00
11:12:20	6.00	6.00	27.50	84.83
11:12:30	6.00	6.00	27.20	84.80
11:12:40	6.17	5.83	27.17	85.00
11:12:50	6.00	5.40	27.00	85.00
11:13:00	5.83	6.00	27.00	85.20
11:13:10	5.80	5.60	27.17	85.83
11:13:20	6.17	5.33	27.00	85.40
11:13:30	6.25	5.17	27.17	86.17
11:13:40	6.00	5.00	27.20	86.75
11:13:50	6.00	4.67	27.33	87.00
11:14:00	6.00	5.00	27.40	87.33
11:14:10	5.83	4.80	27.33	87.00
11:14:20	5.40	5.00	27.00	87.50
11:14:30	6.00	5.00	27.00	87.20
11:14:40	5.60	5.00	27.00	87.33
11:14:50	5.33	4.83	27.00	87.40
11:15:00	5.17	5.00	27.00	87.17
11:15:10	5.00	5.00	27.00	87.00
11:15:20	4.67	5.00	27.00	87.00
11:15:30	5.00	4.80	27.00	87.33
11:15:40	4.80	5.00	27.00	88.00
11:15:50	5.00	5.00	27.00	88.00
11:16:00	5.00	5.00	27.00	88.00
11:16:10	5.00	5.20	27.00	88.17
11:16:20	4.83	5.00	27.00	89.00
11:16:30	5.00	4.83	27.00	89.00
11:16:40	5.00	5.00	27.00	88.67
11:16:50	5.00	5.00	27.00	88.60
11:17:00	4.80	4.80	27.00	88.50
11:17:10	5.00	4.17	27.00	89.00
11:17:20	5.00	5.00	27.00	89.00
11:17:30	5.00	4.40	27.00	89.00
11:17:40	5.20	4.33	27.00	89.00
11:17:50	5.00	4.00	27.00	89.60
11:18:00	4.83	4.17	27.00	89.00
11:18:10	5.00	4.40	27.00	89.67
11:18:20	5.00	4.17	27.00	90.00

Time	PM2.5	PM10	Temp	Humd
11:18:30	4.80	4.00	27.00	89.00
11:18:40	4.17	4.00	27.00	88.40
11:18:50	5.00	4.33	27.00	87.50
11:19:00	4.40	4.40	27.00	87.83
11:19:10	4.33	5.00	27.00	87.00
11:19:20	4.00	5.00	27.00	86.33
11:19:30	4.17	4.50	27.00	87.00
11:19:40	4.40	4.00	27.00	87.00
11:19:50	4.17	4.67	27.00	86.80
11:20:00	4.00	4.33	27.00	86.33
11:20:10	4.00	4.20	27.00	86.17
11:20:20	4.33	4.33	27.00	86.50
11:20:30	4.40	4.25	27.00	87.83
11:20:40	5.00	4.50	27.00	88.00
11:20:50	5.00	4.00	27.00	89.17
11:21:00	4.50	4.00	27.00	91.00
11:21:10	4.00	3.75	27.00	90.67
11:21:20	4.67	4.00	27.00	90.60
11:21:30	4.33	3.67	27.00	90.67
11:21:40	4.20	4.00	27.00	91.00
11:21:50	4.33	3.83	27.00	91.00
11:22:00	4.25	4.20	27.00	91.00
11:22:10	4.50	4.50	27.00	91.75
11:22:20	4.00	4.00	27.00	91.00
11:22:30	4.00	4.50	27.00	91.00
11:22:40	3.80	4.50	27.00	91.00
11:22:50	4.00	4.80	27.00	91.00
11:23:00	3.67	4.33	27.00	90.50
11:23:10	4.00	4.25	27.00	91.00
11:23:20	3.83	4.17	27.00	90.40
11:23:30	4.20	4.00	27.00	90.33
11:23:40	4.50	4.00	27.00	91.00
11:23:50	4.00	4.33	27.00	91.00
11:24:00	4.50	4.00	27.00	91.80
11:24:10	4.50	3.67	27.00	92.00
11:24:20	4.80	3.80	27.00	92.00
11:24:30	4.33	4.50	27.00	91.60
11:24:40	4.25	4.00	27.00	91.17

Time	PM2.5	PM10	Temp	Humd
11:24:50	4.17	4.00	27.00	92.00
11:25:00	4.00	4.60	27.00	92.00
11:25:10	4.00	4.00	26.80	92.60
11:25:20	4.33	4.00	26.67	93.00
11:25:30	4.00	4.40	27.00	93.33
11:25:40	3.67	3.83	27.00	93.25
11:25:50	3.80	4.00	26.80	93.67
11:26:00	4.50	4.17	27.00	94.00
11:26:10	4.00	4.00	27.00	94.33
11:26:20	4.00	4.00	27.00	94.00
11:26:30	4.50	4.50	27.00	94.00
11:26:40	4.00	4.60	27.00	94.20
11:26:50	4.00	5.00	27.00	94.80
11:27:00	4.40	5.00	27.00	94.17
11:27:10	3.83	5.00	27.00	94.00
11:27:20	4.00	5.60	27.00	94.00
11:27:30	4.17	5.00	27.00	93.40
11:27:40	4.00	5.00	27.00	93.50
11:27:50	4.00	5.80	27.00	93.60
11:28:00	4.50	5.67	27.00	93.67
11:28:10	4.60	5.00	27.00	94.00
11:28:20	5.00	6.00	27.00	94.00
11:28:30	5.00	5.80	26.60	94.00
11:28:40	5.00	5.00	27.00	94.00
11:28:50	5.60	5.80	26.67	94.00
11:29:00	5.00	5.67	26.80	94.60
11:29:10	5.00	5.40	26.20	95.00
11:29:20	5.80	6.00	26.20	95.00
11:29:30	5.67	6.20	26.17	95.00
11:29:40	5.00	6.00	26.40	95.00
11:29:50	6.00	5.00	26.33	95.00
11:30:00	5.80	5.40	26.60	95.00
11:30:10	5.00	6.00	26.50	95.00
11:30:20	5.80	5.50	26.60	95.00
11:30:30	5.67	6.00	26.40	95.00
11:30:40	5.40	6.00	26.67	95.00
11:30:50	6.00	5.00	26.80	95.00
11:31:00	6.20	5.67	26.67	95.00

Time	PM2.5	PM10	Temp	Humd
11:31:10	6.00	5.40	26.50	95.00
11:31:20	5.00	5.83	26.80	95.00
11:31:30	5.20	6.00	26.67	94.17
11:31:40	5.83	6.00	26.60	94.00
11:31:50	5.50	6.00	26.83	94.00
11:32:00	6.00	5.40	26.80	94.00
11:32:10	6.00	5.67	26.83	93.40
11:32:20	5.00	5.00	26.67	92.83
11:32:30	5.67	6.00	26.00	92.00
11:32:40	5.40	5.80	26.33	92.67
11:32:50	5.83	6.00	26.80	93.00
11:33:00	6.00	6.00	26.67	92.50
11:33:10	6.00	6.20	26.60	93.17
11:33:20	6.00	6.33	26.80	93.40
11:33:30	5.40	7.00	26.60	94.00
11:33:40	5.67	6.50	26.50	94.20
11:33:50	5.00	6.60	26.83	94.00
11:34:00	6.00	6.83	26.40	93.80
11:34:10	5.80	6.17	26.33	94.00
11:34:20	6.00	6.60	26.00	94.00
11:34:30	6.00	6.20	26.00	94.00
11:34:40	6.20	7.00	26.00	94.00
11:34:50	6.33	6.50	26.00	94.00
11:35:00	7.00	7.20	26.17	94.00
11:35:10	6.50	7.00	26.20	94.60
11:35:20	6.60	7.17	26.40	95.00
11:35:30	6.83	7.00	26.40	95.00
11:35:40	6.17	6.33	26.00	95.00
11:35:50	6.60	7.00	26.20	95.00
11:36:00	6.20	6.50	26.00	95.00
11:36:10	7.00	6.80	26.00	94.60
11:36:20	6.50	6.17	26.00	95.00
11:36:30	7.20	6.00	26.17	95.00
11:36:40	7.00	6.80	26.40	95.00
11:36:50	7.17	6.00	26.50	95.00
11:37:00	7.00	6.40	26.60	95.00
11:37:10	6.33	6.00	26.83	95.00
11:37:20	7.00	6.00	26.50	95.00

Time	PM2.5	PM10	Temp	Humd
11:37:30	6.50	6.00	26.60	95.00
11:37:40	6.80	5.83	26.60	95.00
11:37:50	6.17	6.00	26.20	95.00
11:38:00	6.00	6.17	26.33	95.00
11:38:10	6.80	6.40	26.00	95.00
11:38:20	6.00	6.00	26.20	95.00
11:38:30	6.40	6.00	26.00	94.80
11:38:40	6.00	7.00	26.00	95.00
11:38:50	6.00	6.83	26.17	95.00
11:39:00	6.00	7.00	26.20	95.00
11:39:10	5.83	6.20	26.40	95.00
11:39:20	6.00	6.75	26.50	95.00
11:39:30	6.17	6.83	26.40	95.00
11:39:40	6.40	7.20	26.67	95.00
11:39:50	6.00	7.40	26.20	95.00
11:40:00	6.00	7.20	26.60	95.00
11:40:10	7.00	7.00	26.75	95.00
11:40:20	6.83	6.60	26.67	95.00
11:40:30	7.00	6.25	26.00	95.00
11:40:40	6.20	7.00	26.20	95.00
11:40:50	6.75	6.50	26.60	95.00
11:41:00	6.83	7.00	26.80	95.00
11:41:10	7.20	6.00	26.80	94.50
11:41:20	7.40	7.00	26.50	94.20
11:41:30	7.20	7.00	26.33	95.00
11:41:40	7.00	7.00	26.33	94.60
11:41:50	6.60	6.67	26.60	94.20
11:42:00	6.25	6.80	26.67	94.00
11:42:10	7.00	6.33	26.40	94.00
11:42:20	6.50	6.50	26.50	94.50
11:42:30	7.00	6.20	26.80	94.83
11:42:40	6.00	5.67	27.00	94.00
11:42:50	7.00	4.75	26.40	94.33
11:43:00	7.00	5.00	26.17	95.00
11:43:10	7.00	5.75	26.67	94.83
11:43:20	6.67	5.17	26.60	95.00
11:43:30	6.80	5.00	26.83	95.00
11:43:40	6.33	5.40	26.75	94.80

Time	PM2.5	PM10	Temp	Humd
11:43:50	6.17	5.00	27.00	94.83
11:44:00	6.20	5.00	27.00	94.17
11:44:10	5.67	5.00	27.00	94.40
11:44:20	4.75	5.00	27.00	93.83
11:44:30	5.00	5.00	27.00	93.00
11:44:40	5.75	4.17	27.00	92.83
11:44:50	5.00	4.60	27.00	92.50
11:45:00	5.00	5.00	27.00	92.67
11:45:10	5.00	5.25	27.00	93.00
11:45:20	5.00	4.17	27.00	92.20
11:45:30	5.00	3.80	27.00	91.83
11:45:40	5.00	4.00	27.00	91.80
11:45:50	5.00	4.00	27.00	91.00
11:46:00	5.00	4.00	27.00	90.80
11:46:10	4.17	4.00	27.00	90.00
11:46:20	4.60	4.40	27.00	89.50
11:46:30	5.00	4.17	27.00	89.80
11:46:40	5.25	4.00	27.00	90.00
11:46:50	4.17	4.17	27.00	90.25
11:47:00	3.80	3.50	27.00	90.17
11:47:10	4.00	4.00	27.00	90.60
11:47:20	4.00	4.00	27.00	90.00
11:47:30	4.00	4.00	27.00	90.17
11:47:40	4.00	4.50	27.00	91.00
11:47:50	4.40	4.20	27.00	90.33
11:48:00	4.17	4.00	27.00	90.00
11:48:10	4.00	4.33	27.00	90.00
11:48:20	4.17	4.80	27.00	91.00
11:48:30	3.50	4.25	27.00	91.50
11:48:40	4.00	4.00	27.00	91.00
11:48:50	4.00	4.00	27.00	90.40
11:49:00	4.00	4.20	27.00	90.60
11:49:10	4.50	4.00	27.00	90.80
11:49:20	4.20	4.00	27.00	91.00
11:49:30	4.00	4.40	27.00	90.60
11:49:40	4.33	4.00	27.00	90.17
11:49:50	4.80	4.67	27.00	90.00
11:50:00	4.25	4.60	27.00	90.60

Time	PM2.5	PM10	Temp	Humd
11:50:10	4.00	4.60	27.00	90.50
11:50:20	4.00	4.80	27.00	91.00
11:50:30	4.20	4.67	27.00	90.00
11:50:40	4.00	4.80	27.00	90.40
11:50:50	4.00	4.00	27.00	91.00
11:51:00	4.40	4.00	27.00	91.00
11:51:10	4.00	4.00	27.00	91.00
11:51:20	4.67	4.00	27.00	90.67
11:51:30	4.60	4.00	27.00	90.33
11:51:40	4.60	4.50	27.00	91.00
11:51:50	4.80	5.00	27.00	90.40
11:52:00	4.67	5.67	27.00	90.80
11:52:10	4.80	7.00	27.00	90.00
11:52:20	4.00	6.40	27.00	89.80
11:52:30	4.00	5.60	27.00	89.67
11:52:40	4.00	5.00	27.00	89.80
11:52:50	4.00	4.20	27.00	90.00
11:53:00	4.00	4.60	27.00	90.00
11:53:10	4.50	4.33	27.00	89.17
11:53:20	5.00	4.80	27.00	89.00
11:53:30	5.67	4.67	27.00	89.00
11:53:40	7.00	4.80	27.00	89.00
11:53:50	6.40	5.00	27.00	89.00
11:54:00	5.60	5.00	27.00	89.00
11:54:10	5.00	4.83	27.00	89.00
11:54:20	4.20	5.40	27.00	89.00
11:54:30	4.60	5.00	27.00	88.60
11:54:40	4.33	5.00	27.00	88.80
11:54:50	4.80	5.00	27.00	89.17
11:55:00	4.67	5.17	27.00	89.80
11:55:10	4.80	5.00	27.00	89.17
11:55:20	5.00	5.33	27.00	89.60
11:55:30	5.00	5.20	27.00	89.17
11:55:40	4.83	5.67	27.00	90.60
11:55:50	5.40	5.50	27.00	90.17
11:56:00	5.00	5.40	27.00	90.00
11:56:10	5.00	5.00	27.00	91.00
11:56:20	5.00	5.00	27.00	91.17

Time	PM2.5	PM10	Temp	Humd
11:56:30	5.17	5.00	27.00	91.40
11:56:40	5.00	5.00	27.00	92.00
11:56:50	5.33	5.00	27.00	92.00
11:57:00	5.20	5.17	27.00	92.00
11:57:10	5.67	4.80	27.00	93.00
11:57:20	5.50	4.60	27.00	93.00
11:57:30	5.40	4.40	27.00	93.00
11:57:40	5.00	5.00	27.00	93.80
11:57:50	5.00	4.80	27.00	93.67
11:58:00	5.00	5.67	27.00	94.00
11:58:10	5.00	6.40	27.00	94.00
11:58:20	5.00	7.50	27.00	94.00
11:58:30	5.17	7.80	27.00	94.50
11:58:40	4.80	9.20	27.00	95.00
11:58:50	4.60	12.40	27.00	95.00
11:59:00	4.40	11.80	27.00	95.00
11:59:10	5.00	10.33	27.00	95.00
11:59:20	4.80	9.75	27.00	95.00
11:59:30	5.67	8.17	27.00	95.00
11:59:40	6.40	6.20	27.00	95.00
11:59:50	7.50	5.00	27.00	95.00
12:00:00	7.80	5.33	27.00	95.00
12:00:10	9.20	5.00	27.00	95.00
12:00:20	12.40	4.20	27.00	95.00
12:00:30	11.80	4.25	27.00	95.00
12:00:40	10.33	4.20	27.00	95.00
12:00:50	9.75	4.00	27.00	95.00
12:01:00	8.17	4.00	27.00	95.00
12:01:10	6.20	4.00	27.00	95.00
12:01:20	5.00	4.00	27.00	95.00
12:01:30	5.33	4.00	27.00	95.00
12:01:40	5.00	4.00	27.00	95.00
12:01:50	4.20	4.33	27.00	95.00
12:02:00	4.25	4.40	27.00	95.00
12:02:10	4.20	4.17	26.75	95.00
12:02:20	4.00	4.00	27.00	95.00
12:02:30	4.00	4.20	27.00	95.00
12:02:40	4.00	4.17	27.00	95.00

Time	PM2.5	PM10	Temp	Humd
12:02:50	4.00	4.20	27.00	95.00
12:03:00	4.00	4.33	27.00	95.00
12:03:10	4.00	5.00	27.00	95.00
12:03:20	4.33	4.17	26.80	95.00
12:03:30	4.40	4.80	27.00	95.00
12:03:40	4.17	4.33	27.00	95.00
12:03:50	4.00	4.67	27.00	95.00
12:04:00	4.20	5.00	27.00	95.00
12:04:10	4.17	4.83	27.00	95.00
12:04:20	4.20	5.00	26.80	95.00
12:04:30	4.33	5.00	27.00	95.00
12:04:40	5.00	4.80	26.83	95.00
12:04:50	4.17	5.00	27.00	95.00
12:05:00	4.80	4.50	26.67	95.00
12:05:10	4.33	4.25	26.60	95.00
12:05:20	4.67	4.67	26.83	95.00
12:05:30	5.00	4.80	26.60	95.00
12:05:40	4.83	5.00	26.83	95.00
12:05:50	5.00	4.80	26.50	95.00
12:06:00	5.00	4.00	26.75	95.00
12:06:10	4.80	4.00	26.67	95.00
12:06:20	5.00	4.40	26.00	95.00
12:06:30	4.50	4.17	26.67	95.00
12:06:40	4.25	4.00	26.60	95.00
12:06:50	4.67	4.00	26.83	95.00
12:07:00	4.80	3.40	26.83	95.00
12:07:10	5.00	3.80	27.00	95.00
12:07:20	4.80	4.00	26.83	95.00
12:07:30	4.00	3.67	26.60	95.00
12:07:40	4.00	3.83	26.67	95.00
12:07:50	4.40	4.00	26.80	95.00
12:08:00	4.17	3.83	27.00	95.00
12:08:10	4.00	4.20	27.00	95.00
12:08:20	4.00	4.00	26.67	95.00
12:08:30	3.40	4.00	27.00	95.00
12:08:40	3.80	3.50	26.75	95.00
12:08:50	4.00	4.17	27.00	95.00
12:09:00	3.60	4.00	27.00	95.00

Time	PM2.5	PM10	Temp	Humd
12:09:10	3.83	4.00	26.50	95.00
12:09:20	4.00	4.00	26.80	95.00
12:09:30	3.83	4.00	26.83	95.00
12:09:40	4.20	4.20	26.50	95.00
12:09:50	4.00	4.17	26.80	95.00
12:10:00	4.00	4.00	26.67	95.00
12:10:10	3.50	4.00	27.00	95.00
12:10:20	4.17	4.20	26.60	95.00
12:10:30	4.00	4.00	26.80	95.00
12:10:40	4.00	4.00	26.83	95.00
12:10:50	4.00	4.00	26.75	95.00
12:11:00	4.00	4.00	26.67	95.00
12:11:10	4.20	4.25	26.60	95.00
12:11:20	4.17	5.00	26.40	95.00
12:11:30	4.00	4.00	27.00	95.00
12:11:40	4.00	4.00	27.00	95.00
12:11:50	4.20	4.25	26.67	95.00
12:12:00	4.00	4.25	26.50	95.00
12:12:10	4.00	4.00	26.80	95.00
12:12:20	4.00	5.00	26.40	95.00
12:12:30	4.00	4.50	26.33	95.00
12:12:40	4.40	4.60	26.50	95.00
12:12:50	5.00	5.00	26.50	95.00
12:13:00	4.00	4.60	26.40	95.00
12:13:10	4.00	4.60	26.80	95.00
12:13:20	4.25	4.17	26.25	95.00
12:13:30	4.25	5.00	26.20	95.00
12:13:40	4.00	4.40	26.25	95.00
12:13:50	5.00	4.67	26.80	95.00
12:14:00	4.50	4.67	26.00	95.00
12:14:10	4.60	5.00	26.33	95.00
12:14:20	5.00	4.17	26.83	95.00
12:14:30	4.60	4.60	27.00	95.00
12:14:40	4.67	4.50	26.50	95.00
12:14:50	4.00	5.00	26.33	95.00
12:15:00	5.00	5.00	26.33	95.00
12:15:10	4.40	5.00	26.67	95.00
12:15:20	4.67	5.00	26.40	95.00

Time	PM2.5	PM10	Temp	Humd
12:15:30	4.67	5.00	26.83	95.00
12:15:40	5.00	5.00	26.80	95.00
12:15:50	4.17	5.00	26.60	95.00
12:16:00	4.60	4.00	26.80	95.00
12:16:10	4.50	4.20	27.00	95.00
12:16:20	5.00	4.20	27.00	95.00
12:16:30	5.00	3.75	26.75	95.00
12:16:40	5.00	3.33	26.67	95.00
12:16:50	5.00	4.00	26.80	95.00
12:17:00	5.00	4.67	26.60	95.00
12:17:10	5.00	4.00	26.60	95.00
12:17:20	5.00	4.00	27.00	95.00
12:17:30	4.00	4.00	26.67	95.00
12:17:40	4.20	4.17	26.80	95.00
12:17:50	4.20	4.00	26.50	95.00
12:18:00	3.75	4.00	27.00	95.00
12:18:10	3.33	3.80	26.67	95.00
12:18:20	4.00	4.00	27.00	95.00
12:18:30	4.67	3.67	26.83	95.00
12:18:40	4.00	3.60	26.67	95.00
12:18:50	4.00	4.00	26.20	95.00
12:19:00	4.00	4.00	27.00	95.00
12:19:10	4.17	3.80	26.80	95.00
12:19:20	4.00	3.50	27.00	95.00
12:19:30	4.00	3.80	26.80	95.00
12:19:40	3.80	4.00	27.00	95.00
12:19:50	4.00	4.00	26.60	95.00
12:20:00	3.67	4.00	26.80	95.00
12:20:10	3.60	4.40	27.00	95.00
12:20:20	4.00	4.60	26.80	95.00
12:20:30	4.00	4.20	27.00	95.00
12:20:40	3.80	4.60	27.00	95.00
12:20:50	3.50	5.00	26.67	95.00
12:21:00	3.80	4.80	26.80	95.00
12:21:10	4.00	4.67	27.00	95.00
12:21:20	4.00	4.60	27.00	95.00
12:21:30	4.00	5.00	27.00	95.00
12:21:40	4.40	4.33	26.67	95.00

Time	PM2.5	PM10	Temp	Humd
12:21:50	4.60	5.00	26.40	95.00
12:22:00	4.20	5.00	26.83	95.00
12:22:10	4.60	4.80	26.60	95.00
12:22:20	5.00	4.33	27.00	95.00
12:22:30	4.80	4.80	26.83	95.00
12:22:40	4.67	5.00	26.80	95.00
12:22:50	4.60	4.40	27.00	95.00
12:23:00	5.00	4.17	27.00	95.00
12:23:10	4.33	4.67	26.83	95.00
12:23:20	5.00	4.25	27.00	95.00
12:23:30	5.00	4.83	27.00	95.00
12:23:40	4.80	4.00	27.00	95.00
12:23:50	4.33	4.00	27.00	95.00
12:24:00	4.80	3.80	27.00	95.00
12:24:10	5.00	4.00	27.00	95.00
12:24:20	4.40	4.00	27.00	95.00
12:24:30	4.17	4.00	27.00	95.00
12:24:40	4.67	4.00	27.00	95.00
12:24:50	4.25	4.00	27.00	95.00
12:25:00	4.83	4.00	27.00	95.00
12:25:10	4.00	3.20	27.00	95.00
12:25:20	4.00	3.40	27.00	95.00
12:25:30	3.80	3.50	27.00	95.00
12:25:40	4.00	3.40	27.00	95.00
12:25:50	4.00	3.83	27.00	95.00
12:26:00	4.00	4.00	27.00	95.00
12:26:10	4.00	4.00	27.00	95.00
12:26:20	4.00	3.40	27.00	95.00
12:26:30	4.00	3.60	27.00	95.00
12:26:40	3.20	3.83	27.00	95.00
12:26:50	3.40	4.00	27.00	95.00
12:27:00	3.50	4.00	27.00	95.00
12:27:10	3.40	3.60	27.00	95.00
12:27:20	3.83	4.00	27.00	95.00
12:27:30	4.00	4.00	27.00	95.00
12:27:40	4.00	3.50	27.00	95.00
12:27:50	3.40	4.00	27.00	95.00
12:28:00	3.60	4.00	27.00	95.00

Time	PM2.5	PM10	Temp	Humd
12:28:10	3.83	3.67	27.00	95.00
12:28:20	4.00	4.00	27.00	95.00
12:28:30	4.00	4.00	27.00	95.00
12:28:40	3.60	4.00	27.00	95.00
12:28:50	4.00	4.00	27.00	95.00
12:29:00	4.00	3.20	27.00	95.00
12:29:10	3.50	3.50	27.00	95.00
12:29:20	4.00	4.00	27.00	95.00
12:29:30	4.00	4.00	27.00	95.00
12:29:40	3.67	3.60	27.00	95.00
12:29:50	4.00	4.00	27.00	95.00
12:30:00	4.00	4.00	27.00	95.00
12:30:10	4.00	4.00	27.00	95.00
12:30:20	4.00	3.83	27.00	95.00
12:30:30	3.20	4.00	27.00	95.00
12:30:40	3.50	3.67	27.00	95.00
12:30:50	4.00	3.83	27.00	95.00
12:31:00	4.00	3.80	27.00	95.00
12:31:10	3.60	4.00	27.00	95.00
12:31:20	4.00	4.00	27.00	95.00
12:31:30	4.00	3.83	27.00	95.00
12:31:40	4.00	4.00	27.00	95.00
12:31:50	3.83	3.83	27.00	95.00
12:32:00	4.00	4.17	27.00	95.00
12:32:10	3.67	4.00	27.00	95.00
12:32:20	3.83	4.00	27.00	95.00
12:32:30	3.80	3.60	27.00	95.00
12:32:40	4.00	3.40	27.00	95.00
12:32:50	4.00	3.50	27.00	95.00
12:33:00	3.83	4.00	27.00	95.00
12:33:10	4.00	3.83	27.00	95.00
12:33:20	3.83	4.20	27.00	95.00
12:33:30	4.17	4.00	27.00	95.00
12:33:40	4.00	4.00	27.00	95.00
12:33:50	4.00	4.00	27.00	95.00
12:34:00	3.60	4.00	27.00	95.00
12:34:10	3.40	4.00	27.00	95.00
12:34:20	3.50	4.00	27.00	95.00

Time	PM2.5	PM10	Temp	Humd
12:34:30	4.00	5.40	27.00	95.00
12:34:40	3.83	5.50	27.00	95.00
12:34:50	4.20	5.25	27.00	95.00
12:35:00	4.00	5.00	27.00	95.00
12:35:10	4.00	4.60	27.00	95.00
12:35:20	4.00	5.50	27.00	95.00
12:35:30	4.00	5.00	27.00	95.00
12:35:40	4.00	5.00	27.00	95.00
12:35:50	4.00	5.00	27.00	95.00
12:36:00	5.40	5.00	27.00	95.00
12:36:10	5.50	5.00	27.00	95.00
12:36:20	5.25	5.00	27.00	95.00
12:36:30	5.00	5.00	27.00	95.00
12:36:40	4.60	5.60	27.00	95.00
12:36:50	5.50	5.67	27.00	95.00
12:37:00	5.00	5.17	27.00	95.00
12:37:10	5.00	5.00	27.00	95.00
12:37:20	5.00	5.50	27.00	95.00
12:37:30	5.00	5.60	27.00	95.00
12:37:40	5.00	5.00	27.00	95.00
12:37:50	5.00	5.00	27.00	95.00
12:38:00	5.00	5.33	27.00	95.00
12:38:10	5.60	4.33	27.00	95.00
12:38:20	5.67	5.00	27.00	95.00
12:38:30	5.17	4.80	27.00	95.00
12:38:40	5.00	5.00	27.00	95.00
12:38:50	5.50	5.00	27.00	95.00
12:39:00	5.60	5.00	27.00	95.00
12:39:10	5.00	5.00	27.00	95.00
12:39:20	5.00	5.33	27.00	95.00
12:39:30	5.33	4.40	27.00	95.00
12:39:40	4.33	5.00	27.00	95.00
12:39:50	5.00	4.50	27.00	95.00
12:40:00	4.80	4.20	27.00	95.00
12:40:10	5.00	4.67	27.00	95.00
12:40:20	5.00	4.17	27.00	95.00
12:40:30	5.00	4.80	27.00	95.00
12:40:40	5.00	5.20	27.00	95.00

Time	PM2.5	PM10	Temp	Humd
12:40:50	5.33	4.50	27.00	95.00
12:41:00	4.40	5.20	27.00	95.00
12:41:10	5.00	4.80	27.00	95.00
12:41:20	4.50	5.00	27.00	95.00
12:41:30	4.20	5.00	27.00	95.00
12:41:40	4.67	4.80	27.00	95.00
12:41:50	4.17	5.00	27.00	95.00
12:42:00	4.80	5.60	27.00	95.00
12:42:10	5.20	5.40	27.00	95.00
12:42:20	4.50	5.00	27.00	95.00
12:42:30	5.20	4.67	27.00	95.00
12:42:40	4.80	5.00	27.00	95.00
12:42:50	5.00	5.00	27.00	95.00
12:43:00	5.00	5.00	27.00	95.00
12:43:10	4.80	5.20	27.00	95.00
12:43:20	5.00	5.25	27.00	95.00
12:43:30	5.60	5.00	27.00	95.00
12:43:40	5.40	5.00	27.00	95.00
12:43:50	5.00	4.50	27.00	95.00
12:44:00	4.67	5.25	27.00	95.00
12:44:10	5.00	5.50	27.00	94.00
12:44:20	5.00	5.00	27.00	93.00
12:44:30	5.00	5.40	27.00	93.00
12:44:40	5.20	4.50	27.00	92.00
12:44:50	5.25	5.60	27.00	92.20
12:45:00	5.00	5.50	27.00	91.50
12:45:10	5.00	5.60	27.00	93.17
12:45:20	4.50	5.33	27.00	93.20
12:45:30	5.25	5.33	27.00	93.67
12:45:40	5.50	5.00	27.00	93.50
12:45:50	5.00	5.00	27.00	94.67
12:46:00	5.40	5.40	27.00	95.00
12:46:10	4.50	5.50	27.00	95.00
12:46:20	5.60	5.75	27.00	95.00
12:46:30	5.50	5.17	27.00	95.00
12:46:40	5.60	6.00	27.00	95.00
12:46:50	5.33	5.67	27.00	94.20
12:47:00	5.33	6.00	27.00	93.17

Time	PM2.5	PM10	Temp	Humd
12:47:10	5.00	5.50	27.00	93.33
12:47:20	5.00	6.17	27.00	93.80
12:47:30	5.40	6.00	27.00	92.83
12:47:40	5.50	5.83	27.00	93.40
12:47:50	5.75	6.20	27.00	94.17
12:48:00	5.17	6.33	27.00	88.50
12:48:10	6.00	6.00	27.00	90.67
12:48:20	5.67	6.20	27.00	88.40
12:48:30	6.00	6.00	27.00	87.67
12:48:40	5.50	6.00	27.00	86.33
12:48:50	6.17	6.17	27.00	86.25
12:49:00	6.00	5.80	27.00	87.17
12:49:10	5.83	5.67	27.00	87.40
12:49:20	6.20	6.80	27.00	87.00
12:49:30	6.33	7.80	27.00	87.00
12:49:40	6.00	7.00	27.17	85.83
12:49:50	6.20	6.00	27.00	85.40
12:50:00	6.00	6.67	27.33	86.80
12:50:10	6.00	6.00	27.20	85.33
12:50:20	6.17	6.00	27.20	84.80
12:50:30	5.80	6.00	27.00	83.50
12:50:40	5.67	6.00	27.40	83.80
12:50:50	6.80	6.00	27.17	83.67
12:51:00	7.80	6.00	27.40	83.20
12:51:10	7.00	6.17	27.50	84.00
12:51:20	6.00	6.00	27.80	82.67
12:51:30	6.67	6.00	27.83	83.00
12:51:40	6.00	5.80	27.60	82.50
12:51:50	6.00	6.00	28.00	84.40
12:52:00	6.00	5.83	28.00	85.00
12:52:10	6.00	6.60	28.00	84.80
12:52:20	6.00	6.17	28.00	84.83
12:52:30	6.00	6.00	27.80	84.20
12:52:40	6.17	5.50	27.80	83.40
12:52:50	6.00	5.40	28.00	84.83
12:53:00	6.00	6.00	28.00	83.80
12:53:10	5.80	7.00	28.00	83.00
12:53:20	6.00	6.40	28.00	84.00

Time	PM2.5	PM10	Temp	Humd
12:53:30	5.83	6.50	28.00	84.20
12:53:40	6.60	7.20	28.00	83.33
12:53:50	6.17	7.50	28.00	83.20
12:54:00	6.00	7.00	28.00	83.50
12:54:10	5.50	6.33	28.00	83.40
12:54:20	5.40	6.00	28.00	83.33
12:54:30	6.00	6.50	28.00	83.00
12:54:40	7.00	6.60	28.00	83.00
12:54:50	6.40	6.60	28.00	82.40
12:55:00	6.50	6.20	28.00	82.00
12:55:10	7.20	6.40	28.00	82.25
12:55:20	7.50	6.50	28.00	82.60
12:55:30	7.00	6.00	28.00	81.50
12:55:40	6.33	6.50	28.00	81.00
12:55:50	6.00	6.60	28.00	80.83
12:56:00	6.50	7.00	28.00	80.25
12:56:10	6.60	6.17	28.00	80.33
12:56:20	6.60	6.00	28.00	79.40
12:56:30	6.20	5.80	28.00	79.60
12:56:40	6.40	6.25	28.00	79.40
12:56:50	6.50	5.83	28.00	80.00
12:57:00	6.00	5.50	28.00	79.50
12:57:10	6.50	6.00	28.00	79.00
12:57:20	6.40	6.00	28.00	78.50
12:57:30	6.80	6.60	28.00	78.60
12:57:40	6.17	7.83	28.00	78.00
12:57:50	6.00	8.00	28.00	78.00
12:58:00	5.80	6.33	28.00	77.00
12:58:10	6.25	5.33	28.00	76.80
12:58:20	5.83	7.50	28.00	76.00
12:58:30	5.50	10.83	28.00	76.83
12:58:40	6.00	10.00	28.00	77.00
12:58:50	6.00	8.17	28.00	77.00
12:59:00	6.60	8.80	28.00	76.80
12:59:10	7.83	7.17	28.00	77.00
12:59:20	8.00	7.40	28.00	76.00
12:59:30	6.33	5.33	28.00	77.00
12:59:40	5.33	5.00	28.00	76.67

Time	PM2.5	PM10	Temp	Humd
12:59:50	7.50	5.17	28.00	76.00
13:00:00	10.83	5.00	28.00	76.00
13:00:10	10.00	5.20	28.00	76.17
13:00:20	7.83	5.40	28.17	76.00
13:00:30	8.80	4.80	28.00	76.50
13:00:40	7.17	4.33	28.00	76.20
13:00:50	7.40	5.40	28.17	76.17
13:01:00	5.33	5.33	28.20	75.80
13:01:10	5.00	5.00	28.00	75.00
13:01:20	5.20	5.00	28.00	75.00
13:01:30	5.00	5.50	28.00	74.83
13:01:40	5.20	5.50	28.20	73.67
13:01:50	5.40	6.17	28.33	73.20
13:02:00	4.80	6.60	28.20	73.20
13:02:10	4.33	5.60	28.25	73.20
13:02:20	5.40	6.20	28.50	73.33
13:02:30	5.33	6.40	28.25	74.20
13:02:40	5.00	7.20	28.67	74.33
13:02:50	5.00	6.75	28.80	74.40
13:03:00	5.50	5.50	29.00	74.75
13:03:10	5.50	6.00	28.80	75.50
13:03:20	6.17	7.67	29.00	74.50
13:03:30	6.60	7.40	29.00	74.67
13:03:40	5.60	6.17	29.00	75.00
13:03:50	6.20	6.00	29.00	75.00
13:04:00	6.40	5.60	29.00	75.20
13:04:10	7.20	6.00	29.00	75.20
13:04:20	6.75	6.00	29.00	75.00
13:04:30	5.50	6.17	29.00	75.00
13:04:40	6.00	6.20	29.00	75.33
13:04:50	7.67	5.60	29.00	76.00
13:05:00	7.40	5.20	29.00	75.67
13:05:10	6.17	4.50	29.00	75.40
13:05:20	6.00	4.83	29.00	75.33
13:05:30	5.60	5.00	29.00	75.33
13:05:40	6.00	5.00	29.00	75.00
13:05:50	6.00	5.00	29.00	75.00
13:06:00	6.17	4.60	29.00	74.75

Time	PM2.5	PM10	Temp	Humd
13:06:10	6.20	5.17	29.00	74.67
13:06:20	5.60	5.80	29.00	74.40
13:06:30	5.20	5.67	29.00	74.60
13:06:40	4.50	5.00	29.00	73.60
13:06:50	4.83	5.20	29.00	73.00
13:07:00	5.00	5.50	29.00	73.00
13:07:10	5.00	6.33	29.00	72.60
13:07:20	5.00	6.80	29.00	73.83
13:07:30	4.60	7.00	29.00	73.00
13:07:40	5.17	6.00	29.00	72.00
13:07:50	5.80	6.00	29.00	71.00
13:08:00	5.67	6.00	29.00	72.20
13:08:10	5.00	6.00	29.00	73.00
13:08:20	5.20	5.20	29.00	73.25
13:08:30	5.50	5.00	29.00	73.00
13:08:40	6.33	5.00	29.00	73.50
13:08:50	6.80	5.00	29.00	74.00
13:09:00	7.00	5.00	29.00	73.80
13:09:10	6.00	5.83	29.00	73.50
13:09:20	6.00	6.40	29.00	73.67
13:09:30	6.00	5.67	29.00	74.00
13:09:40	6.00	5.20	29.00	72.40
13:09:50	5.20	6.00	29.00	71.00
13:10:00	5.00	5.40	29.00	71.40
13:10:10	5.00	5.80	29.00	70.25
13:10:20	5.00	6.00	29.00	70.17
13:10:30	5.00	5.40	29.00	70.60
13:10:40	5.83	5.67	29.00	69.80
13:10:50	6.40	5.25	29.00	70.33
13:11:00	5.67	5.33	29.00	71.40
13:11:10	5.20	6.67	29.00	71.17
13:11:20	6.00	6.60	29.00	70.80
13:11:30	5.40	5.67	29.00	70.20
13:11:40	5.80	5.80	29.00	70.80
13:11:50	6.00	5.00	29.00	71.00
13:12:00	5.40	5.00	29.00	71.00
13:12:10	5.67	5.00	29.00	71.00
13:12:20	5.25	5.40	29.00	70.17

Time	PM2.5	PM10	Temp	Humd
13:12:30	5.33	5.00	29.00	70.25
13:12:40	6.67	6.83	29.00	70.50
13:12:50	6.60	8.00	29.00	70.50
13:13:00	5.67	5.33	29.17	70.40
13:13:10	5.80	5.60	29.00	70.50
13:13:20	5.00	6.67	29.00	71.20
13:13:30	5.00	5.80	29.00	70.33
13:13:40	5.00	4.67	29.40	69.40
13:13:50	5.40	4.75	29.33	70.83
13:14:00	5.00	4.75	29.60	71.00
13:14:10	6.67	4.33	29.50	71.00
13:14:20	8.00	3.60	30.00	71.00
13:14:30	5.33	3.17	30.00	71.00
13:14:40	5.60	4.00	30.00	71.17
13:14:50	6.67	3.33	30.00	71.00
13:15:00	5.80	4.00	30.00	70.83
13:15:10	4.67	4.00	30.00	71.60
13:15:20	4.75	4.00	30.00	70.83
13:15:30	4.75	4.00	30.00	68.50
13:15:40	4.33	4.00	30.00	68.00
13:15:50	3.60	4.00	30.00	68.00
13:16:00	3.17	3.67	30.00	67.20
13:16:10	4.00	3.83	30.00	66.33
13:16:20	3.33	4.00	30.00	67.80
13:16:30	4.00	4.00	30.00	68.33
13:16:40	4.00	4.20	30.00	68.80
13:16:50	4.00	5.00	30.00	68.33
13:17:00	4.00	5.00	30.00	69.20
13:17:10	4.00	5.00	30.00	69.50
13:17:20	4.00	4.80	30.00	67.33
13:17:30	3.67	4.00	30.00	67.00
13:17:40	3.83	4.00	30.00	67.17
13:17:50	4.00	4.75	30.00	67.83
13:18:00	4.00	4.00	30.00	67.80
13:18:10	4.20	4.50	30.00	67.33
13:18:20	5.00	4.00	30.00	67.00
13:18:30	5.00	4.80	30.00	67.83
13:18:40	5.00	5.00	30.00	68.50

Time	PM2.5	PM10	Temp	Humd
13:18:50	4.80	5.00	30.00	69.00
13:19:00	4.00	9.40	30.00	67.80
13:19:10	4.00	13.75	30.00	68.00
13:19:20	4.75	5.50	30.00	66.50
13:19:30	4.00	3.00	30.00	67.75
13:19:40	4.50	4.20	30.00	67.40
13:19:50	4.00	4.17	30.80	68.50
13:20:00	4.80	4.20	30.00	66.33
13:20:10	5.00	3.80	30.00	67.40
13:20:20	5.00	4.00	30.00	67.67
13:20:30	9.20	3.67	30.00	68.80
13:20:40	13.00	3.25	30.33	69.20
13:20:50	5.25	4.00	30.20	67.50
13:21:00	3.00	4.20	30.00	66.00
13:21:10	4.20	5.00	30.00	65.25
13:21:20	4.17	4.75	30.00	65.40
13:21:30	4.20	4.60	30.50	66.17
13:21:40	3.80	4.60	30.40	65.00
13:21:50	4.00	4.80	30.20	64.00
13:22:00	3.67	4.80	30.25	64.60
13:22:10	3.25	4.80	30.50	66.67
13:22:20	4.00	4.40	30.20	66.50
13:22:30	4.20	4.50	30.20	66.20
13:22:40	5.00	4.00	30.00	67.20
13:22:50	4.75	3.83	30.40	65.75
13:23:00	4.60	4.00	30.40	65.00
13:23:10	4.60	4.75	30.80	64.40
13:23:20	4.80	3.50	30.33	66.00
13:23:30	4.80	3.00	30.60	66.00
13:23:40	4.80	3.50	30.67	66.40
13:23:50	4.40	3.25	30.25	68.00
13:24:00	4.50	3.00	31.00	68.20
13:24:10	4.00	3.33	30.75	67.00
13:24:20	3.83	3.00	31.00	67.20
13:24:30	4.00	3.00	31.00	64.83
13:24:40	4.75	2.60	31.00	64.50
13:24:50	3.50	2.67	31.00	66.75
13:25:00	3.00	2.00	31.00	65.00

Time	PM2.5	PM10	Temp	Humd
13:25:10	3.50	2.17	31.00	64.25
13:25:20	3.25	2.40	31.00	63.67
13:25:30	3.00	2.33	31.00	65.50
13:25:40	3.33	2.00	31.00	65.40
13:25:50	3.00	2.00	31.00	65.17
13:26:00	3.00	2.00	31.00	65.80
13:26:10	2.60	2.00	31.00	65.17
13:26:20	2.67	2.00	31.00	64.00
13:26:30	2.00	2.00	31.00	63.83
13:26:40	2.17	2.20	31.00	63.60
13:26:50	2.40	2.50	31.00	65.00
13:27:00	2.33	2.75	31.00	63.80
13:27:10	2.00	2.80	31.00	64.50
13:27:20	2.00	2.60	31.00	63.00
13:27:30	2.00	3.00	31.00	63.20
13:27:40	2.00	3.40	31.00	62.00
13:27:50	2.00	2.80	31.00	61.80
13:28:00	2.00	2.80	31.00	64.33
13:28:10	2.20	3.00	31.00	62.80
13:28:20	2.50	3.00	31.00	62.00
13:28:30	2.75	2.40	31.20	62.75
13:28:40	2.80	2.40	31.00	62.25
13:28:50	2.60	2.75	31.60	62.00
13:29:00	3.00	3.00	32.00	62.60
13:29:10	3.40	3.00	32.00	62.50
13:29:20	2.80	3.00	31.40	63.40
13:29:30	2.80	3.00	31.40	62.60
13:29:40	3.00	3.00	31.75	63.80
13:29:50	3.00	3.00	31.50	62.50
13:30:00	2.40	3.00	31.20	61.17
13:30:10	2.40	2.50	31.20	60.20
13:30:20	2.75	3.00	31.17	61.00
13:30:30	3.00	3.00	31.80	60.25
13:30:40	3.00	3.00	31.50	60.17
13:30:50	3.00	3.00	31.00	60.80
13:31:00	3.00	2.83	31.83	61.40
13:31:10	3.00	3.00	31.50	61.17
13:31:20	3.00	2.83	31.80	61.60

Time	PM2.5	PM10	Temp	Humd
13:31:30	3.00	3.00	32.00	61.17
13:31:40	2.50	3.00	31.60	60.50
13:31:50	3.00	2.83	32.00	62.83
13:32:00	3.00	2.67	31.60	62.25
13:32:10	3.00	2.80	31.67	62.00
13:32:20	3.00	2.75	31.40	62.20
13:32:30	2.83	2.67	31.40	61.40
13:32:40	3.00	3.00	31.67	61.83
13:32:50	2.83	3.00	31.67	61.20
13:33:00	3.00	3.00	31.60	61.33
13:33:10	3.00	2.80	31.75	61.00
13:33:20	2.83	2.67	31.67	60.80
13:33:30	2.67	2.60	32.00	61.33
13:33:40	2.80	2.60	32.00	61.00
13:33:50	2.75	2.60	32.00	60.20
13:34:00	2.67	2.33	32.00	60.50
13:34:10	3.00	2.00	32.00	59.50
13:34:20	3.00	2.50	32.00	59.75
13:34:30	3.00	2.20	32.00	59.20
13:34:40	2.80	2.67	32.00	59.40
13:34:50	2.67	2.50	32.00	59.80
13:35:00	2.60	2.20	32.00	59.00
13:35:10	2.60	2.80	32.00	59.00
13:35:20	2.60	3.00	32.00	59.40
13:35:30	2.33	3.17	32.00	61.00
13:35:40	2.00	3.00	32.00	60.67
13:35:50	2.50	3.00	32.00	59.80
13:36:00	2.17	3.00	32.00	58.17
13:36:10	2.80	3.00	32.00	58.60
13:36:20	2.50	3.00	32.00	59.33
13:36:30	2.20	3.00	32.00	58.17
13:36:40	2.80	3.00	32.00	59.00
13:36:50	3.00	3.00	32.00	57.60
13:37:00	3.17	3.00	32.00	57.80
13:37:10	3.00	3.00	32.00	57.67
13:37:20	3.00	2.67	32.00	57.20
13:37:30	3.00	3.00	32.00	58.33
13:37:40	3.00	3.00	32.00	57.40

Time	PM2.5	PM10	Temp	Humd
13:37:50	3.00	3.00	32.00	58.25
13:38:00	3.00	3.00	32.00	57.00
13:38:10	3.00	3.00	32.00	57.00
13:38:20	3.00	3.00	32.00	57.83
13:38:30	3.00	3.00	32.00	58.00
13:38:40	3.00	3.17	32.00	58.50
13:38:50	2.67	3.20	32.00	58.25
13:39:00	3.00	3.00	32.00	57.50
13:39:10	3.00	2.25	32.00	57.33
13:39:20	3.00	3.00	32.00	58.00
13:39:30	3.00	2.75	32.00	58.50
13:39:40	3.00	3.00	32.00	59.20
13:39:50	3.00	3.00	32.00	58.80
13:40:00	3.00	2.80	24.00	59.00
13:40:10	3.17	3.00	32.00	58.83
13:40:20	3.20	3.00	32.00	59.00
13:40:30	3.00	3.00	32.00	59.00
13:40:40	2.25	3.00	32.00	58.80
13:40:50	3.00	3.17	32.00	44.25
13:41:00	2.75	3.00	32.00	58.83
13:41:10	3.00	3.80	32.00	58.50
13:41:20	3.00	3.00	32.00	59.40
13:41:30	2.80	3.20	32.00	59.50
13:41:40	3.00	3.00	32.00	59.80
13:41:50	3.00	3.50	32.00	59.33
13:42:00	3.00	3.00	32.00	59.00
13:42:10	3.00	3.20	32.00	59.40
13:42:20	3.17	3.67	32.00	60.00
13:42:30	3.00	3.17	32.00	60.00
13:42:40	3.80	3.00	32.00	60.00
13:42:50	3.00	3.40	32.00	60.40
13:43:00	3.20	3.60	32.00	61.00
13:43:10	3.00	4.00	32.00	59.20
13:43:20	3.50	4.00	32.00	59.20
13:43:30	3.00	3.80	32.00	59.50
13:43:40	3.20	3.75	32.00	59.00
13:43:50	3.67	3.25	32.00	59.00
13:44:00	3.17	3.00	32.00	59.67

Time	PM2.5	PM10	Temp	Humd
13:44:10	3.00	3.00	32.00	59.83
13:44:20	3.40	3.33	32.00	59.75
13:44:30	3.60	3.40	32.00	59.80
13:44:40	4.00	3.17	32.00	59.60
13:44:50	4.00	3.00	32.00	59.25
13:45:00	3.80	3.40	32.00	59.00
13:45:10	3.75	3.80	32.00	57.80
13:45:20	3.25	3.50	32.00	58.00
13:45:30	3.00	4.17	32.00	58.25
13:45:40	3.00	4.00	32.00	58.40
13:45:50	3.33	3.50	32.00	59.00
13:46:00	3.40	3.75	32.00	59.33
13:46:10	3.17	4.00	32.00	59.00
13:46:20	3.00	3.83	31.83	59.00
13:46:30	3.40	4.50	31.75	58.60
13:46:40	3.80	4.00	31.75	59.00
13:46:50	3.50	4.50	32.00	58.60
13:47:00	4.17	5.33	32.00	59.50
13:47:10	4.00	4.00	31.83	60.00
13:47:20	3.50	4.00	32.00	60.75
13:47:30	3.75	4.00	32.00	60.50
13:47:40	4.00	4.00	31.50	60.50
13:47:50	3.83	4.67	32.00	60.80
13:48:00	4.50	4.25	31.75	60.67
13:48:10	4.00	5.00	31.60	60.75
13:48:20	4.50	4.50	31.83	60.20
13:48:30	5.33	4.50	32.00	60.50
13:48:40	4.00	4.00	31.83	60.67
13:48:50	4.00	4.00	32.00	60.75
13:49:00	4.00	4.33	31.83	61.00
13:49:10	4.00	4.40	32.00	61.00
13:49:20	4.67	3.75	32.00	60.75
13:49:30	4.25	4.00	32.00	61.00
13:49:40	5.00	4.00	32.00	61.00
13:49:50	4.50	4.00	32.00	60.17
13:50:00	4.50	3.80	32.00	61.00
13:50:10	4.00	4.40	32.00	60.75
13:50:20	4.00	4.20	32.00	61.00

Time	PM2.5	PM10	Temp	Humd
13:50:30	4.33	5.00	32.00	61.00
13:50:40	4.40	4.25	32.00	61.50
13:50:50	3.75	4.00	32.00	61.00
13:51:00	4.00	3.67	32.00	61.00
13:51:10	4.00	4.00	32.00	60.60
13:51:20	4.00	4.00	32.00	59.25
13:51:30	3.80	4.00	32.00	59.40
13:51:40	4.40	4.17	32.00	60.00
13:51:50	4.20	4.00	32.00	60.20
13:52:00	5.00	4.00	32.00	60.00
13:52:10	4.25	4.00	32.00	60.20
13:52:20	4.00	4.00	32.20	60.00
13:52:30	3.67	3.83	32.67	59.80
13:52:40	4.00	4.20	32.25	60.00
13:52:50	4.00	4.00	32.00	60.00
13:53:00	4.00	4.00	32.00	60.00
13:53:10	4.17	4.00	32.00	59.80
13:53:20	4.00	4.00	32.00	60.17
13:53:30	4.00	4.25	32.00	59.50
13:53:40	4.00	4.67	32.00	60.00
13:53:50	4.00	4.40	32.00	60.00
13:54:00	3.83	4.20	32.00	60.00
13:54:10	4.20	4.67	32.00	60.17
13:54:20	4.00	4.60	32.00	61.00
13:54:30	4.00	4.00	32.00	61.20
13:54:40	4.00	4.00	32.00	61.00
13:54:50	4.00	4.40	32.00	61.00
13:55:00	4.25	4.00	32.00	61.00
13:55:10	4.67	4.00	32.00	61.00
13:55:20	4.40	4.40	32.00	61.17
13:55:30	4.20	4.83	32.00	61.80
13:55:40	4.67	4.75	32.00	61.80
13:55:50	4.60	5.00	32.00	61.00
13:56:00	4.00	4.25	32.00	61.80
13:56:10	4.00	4.17	32.00	62.60
13:56:20	4.33	4.20	32.00	62.00
13:56:30	4.00	4.25	32.00	62.00
13:56:40	4.00	4.83	32.00	62.00

Time	PM2.5	PM10	Temp	Humd
13:56:50	4.40	4.20	32.00	62.00
13:57:00	4.83	4.40	32.00	62.00
13:57:10	4.75	4.25	32.00	62.00
13:57:20	5.00	5.20	32.50	61.00
13:57:30	4.25	5.00	32.17	60.00
13:57:40	4.17	4.60	32.00	60.25
13:57:50	4.20	4.20	32.00	60.17
13:58:00	4.25	4.00	32.00	60.00
13:58:10	4.83	4.00	32.20	60.00
13:58:20	4.20	4.00	32.25	59.17
13:58:30	4.40	4.25	32.20	59.60
13:58:40	4.25	5.00	32.80	59.00
13:58:50	5.20	4.00	32.80	59.00
13:59:00	5.00	4.00	32.00	59.20
13:59:10	4.60	4.00	32.00	59.25
13:59:20	4.20	5.00	32.00	59.20
13:59:30	4.00	4.00	32.00	59.20
13:59:40	4.00	4.00	32.00	58.80
13:59:50	4.00	4.00	32.00	58.60
14:00:00	4.25	4.17	32.00	59.60
14:00:10	5.00	3.17	32.00	60.00
14:00:20	4.00	3.50	32.00	60.00
14:00:30	4.00	3.83	32.00	60.00
14:00:40	4.00	3.40	32.00	59.67
14:00:50	5.00	3.00	32.17	60.00
14:01:00	4.00	3.00	32.00	60.00
14:01:10	4.00	3.17	32.00	61.00
14:01:20	4.00	4.00	32.00	60.00
14:01:30	4.17	3.80	32.00	59.80
14:01:40	3.17	3.00	32.00	59.33
14:01:50	3.50	3.00	32.00	59.00
14:02:00	3.83	3.00	32.00	59.00
14:02:10	3.40	3.50	32.00	59.50
14:02:20	3.00	3.80	32.00	60.00
14:02:30	3.00	3.20	32.00	59.80
14:02:40	3.17	3.50	32.00	60.00
14:02:50	4.00	3.40	32.00	60.00
14:03:00	3.80	3.80	32.00	59.67

Time	PM2.5	PM10	Temp	Humd
14:03:10	3.00	3.40	32.00	59.60
14:03:20	3.00	3.60	32.00	60.00
14:03:30	3.00	3.00	32.00	60.00
14:03:40	3.50	3.50	32.00	60.00
14:03:50	3.80	3.50	32.00	60.00
14:04:00	3.20	3.00	32.00	60.00
14:04:10	3.50	2.83	32.00	60.60
14:04:20	3.40	3.50	32.00	61.00
14:04:30	3.80	4.00	32.00	60.00
14:04:40	3.40	3.00	32.00	61.00
14:04:50	3.60	3.00	32.00	61.00
14:05:00	3.00	3.20	32.00	61.00
14:05:10	3.50	2.20	32.00	61.00
14:05:20	3.50	2.67	32.00	61.25
14:05:30	3.00	2.60	32.00	61.50
14:05:40	2.83	2.00	32.00	61.00
14:05:50	3.50	2.00	32.00	61.33
14:06:00	4.00	2.20	31.80	61.00
14:06:10	3.00	3.50	32.00	61.00
14:06:20	3.00	2.25	32.00	60.60
14:06:30	3.20	2.00	31.80	61.00
14:06:40	2.20	2.80	31.80	61.00
14:06:50	2.67	2.80	31.80	61.40
14:07:00	2.60	3.17	31.33	61.67
14:07:10	2.00	3.00	31.00	61.80
14:07:20	2.00	3.20	31.00	62.20
14:07:30	2.20	2.00	31.20	62.00
14:07:40	3.50	2.00	31.20	62.00
14:07:50	2.25	2.00	31.50	62.17
14:08:00	2.00	1.80	31.00	63.00
14:08:10	2.80	2.00	31.00	63.00
14:08:20	2.80	1.50	31.00	63.00
14:08:30	3.17	2.00	31.00	63.20
14:08:40	3.00	3.60	31.00	64.83
14:08:50	3.20	2.50	31.00	67.60
14:09:00	2.00	3.60	31.00	69.00
14:09:10	2.00	4.75	31.00	69.60
14:09:20	2.00	2.20	31.00	70.00

Time	PM2.5	PM10	Temp	Humd
14:09:30	1.80	4.40	31.00	71.00
14:09:40	2.00	4.83	31.00	70.40
14:09:50	1.50	4.00	31.00	70.67
14:10:00	2.00	3.67	31.00	71.00
14:10:10	3.60	2.80	31.00	71.83
14:10:20	2.50	2.50	31.00	72.00
14:10:30	4.00	6.17	31.00	71.67
14:10:40	4.33	12.50	31.00	72.00
14:10:50	2.20	5.83	31.00	72.25
14:11:00	4.40	1.60	31.00	71.20
14:11:10	4.83	1.67	31.00	71.00
14:11:20	4.00	1.40	31.00	71.00
14:11:30	3.67	2.00	31.00	71.00
14:11:40	2.80	3.25	31.00	71.00
14:11:50	2.50	4.83	30.20	71.00
14:12:00	6.17	9.00	30.00	70.50
14:12:10	12.50	6.50	30.00	70.17
14:12:20	5.83	3.00	30.00	71.00
14:12:30	1.60	2.50	30.00	70.67
14:12:40	1.67	8.00	30.00	69.40
14:12:50	1.40	10.40	30.00	70.67
14:13:00	2.00	5.00	30.00	71.20
14:13:10	3.25	3.00	30.00	72.00
14:13:20	4.83	2.00	30.00	71.00
14:13:30	9.00	1.83	30.00	69.17
14:13:40	6.50	2.60	30.00	71.33
14:13:50	3.00	3.00	30.00	71.00
14:14:00	2.50	2.60	30.00	71.25
14:14:10	8.00	2.17	30.00	71.50
14:14:20	10.40	2.00	30.00	72.60
14:14:30	5.00	2.00	30.00	74.40
14:14:40	3.00	2.00	30.00	74.00
14:14:50	2.00	2.40	30.00	74.75
14:15:00	1.83	2.40	30.00	74.33
14:15:10	2.60	2.75	30.00	74.17
14:15:20	3.00	2.20	30.00	74.00
14:15:30	2.60	2.60	30.00	74.00
14:15:40	2.17	2.17	30.00	74.00

Time	PM2.5	PM10	Temp	Humd
14:15:50	2.00	2.60	30.00	73.33
14:16:00	2.00	2.00	30.00	74.00
14:16:10	2.00	2.00	30.00	74.83
14:16:20	2.40	2.20	30.00	74.50
14:16:30	2.40	2.00	30.00	74.40
14:16:40	2.75	2.00	30.00	74.20
14:16:50	2.20	2.60	30.00	75.00
14:17:00	2.60	2.33	30.00	74.40
14:17:10	2.17	2.00	30.00	75.80
14:17:20	2.60	2.00	30.00	75.00
14:17:30	2.00	2.00	30.00	75.00
14:17:40	2.00	2.17	30.00	75.00
14:17:50	2.20	2.20	30.00	75.00
14:18:00	2.00	2.00	30.00	74.00
14:18:10	2.00	2.00	30.00	74.00
14:18:20	2.60	2.20	30.00	74.00
14:18:30	2.33	2.33	30.00	74.00
14:18:40	2.00	2.60	30.00	73.67
14:18:50	2.00	2.50	30.00	73.00
14:19:00	2.00	2.20	30.00	73.00
14:19:10	2.17	2.50	30.00	72.33
14:19:20	2.20	2.50	30.00	72.00
14:19:30	2.00	2.33	30.00	73.00
14:19:40	2.00	2.00	30.00	73.67
14:19:50	2.20	2.00	30.00	74.00
14:20:00	2.33	2.00	30.00	73.80
14:20:10	2.60	3.00	30.00	74.00
14:20:20	2.50	2.00	30.00	74.60
14:20:30	2.20	2.00	30.00	74.17
14:20:40	2.50	2.00	30.00	70.00
14:20:50	2.50	2.33	30.00	73.17
14:21:00	2.33	2.00	30.00	74.25
14:21:10	2.00	2.00	30.00	73.83
14:21:20	2.00	2.00	30.00	74.17
14:21:30	2.00	2.40	30.00	74.00
14:21:40	3.00	2.00	30.00	74.60
14:21:50	2.00	2.00	30.00	74.50
14:22:00	2.00	2.00	30.00	75.00

Time	PM2.5	PM10	Temp	Humd
14:22:10	2.00	2.00	30.00	74.40
14:22:20	2.33	2.00	30.00	73.60
14:22:30	2.00	2.00	30.00	72.67
14:22:40	2.00	2.20	30.00	74.00
14:22:50	2.00	2.00	30.00	74.17
14:23:00	2.40	2.17	30.00	74.00
14:23:10	2.00	2.00	30.00	73.00
14:23:20	2.00	2.00	30.00	73.40
14:23:30	2.00	2.00	30.00	73.00
14:23:40	2.00	2.00	30.00	73.00
14:23:50	2.00	2.33	30.00	73.25
14:24:00	2.00	2.00	29.00	73.00
14:24:10	2.20	2.20	29.00	73.00
14:24:20	2.00	2.20	29.00	74.00
14:24:30	2.17	2.00	29.00	73.25
14:24:40	2.00	2.00	29.33	73.67
14:24:50	2.00	2.00	29.80	74.00
14:25:00	2.00	2.00	29.80	75.83
14:25:10	2.00	2.40	29.60	76.67
14:25:20	2.33	2.17	30.00	76.33
14:25:30	2.00	2.20	29.75	76.00
14:25:40	2.20	2.17	29.20	75.80
14:25:50	2.17	2.17	29.00	76.00
14:26:00	2.00	2.00	29.00	75.60
14:26:10	2.00	2.00	29.00	74.83
14:26:20	2.00	2.80	29.00	74.00
14:26:30	2.00	2.00	29.00	73.80
14:26:40	2.40	2.00	29.00	75.20
14:26:50	2.17	2.00	29.00	74.80
14:27:00	2.20	2.00	29.00	75.83
14:27:10	2.17	2.00	29.00	77.00
14:27:20	2.17	2.00	29.00	77.17
14:27:30	2.00	2.40	29.20	77.17
14:27:40	2.00	2.83	29.80	77.60
14:27:50	2.80	2.80	29.60	77.33
14:28:00	2.00	2.67	29.83	76.20
14:28:10	2.00	2.33	29.83	76.00
14:28:20	2.00	2.83	29.80	75.00

Time	PM2.5	PM10	Temp	Humd
14:28:30	2.00	3.00	30.00	75.00
14:28:40	2.00	3.00	30.00	75.00
14:28:50	2.00	2.50	30.00	74.00
14:29:00	2.40	2.60	30.00	74.00
14:29:10	2.83	2.17	30.00	74.00
14:29:20	2.80	2.60	30.00	73.17
14:29:30	2.67	2.83	30.00	73.00
14:29:40	2.33	3.00	30.00	73.00
14:29:50	2.83	2.20	30.00	73.33
14:30:00	3.00	2.33	30.00	73.67
14:30:10	3.00	2.40	30.00	73.00
14:30:20	2.50	2.67	30.00	73.00
14:30:30	2.60	2.50	30.00	73.00
14:30:40	2.17	2.67	30.00	73.40
14:30:50	2.60	2.40	30.00	73.17
14:31:00	2.83	3.00	30.00	73.00
14:31:10	3.00	3.00	30.00	73.00
14:31:20	2.20	3.00	30.00	73.00
14:31:30	2.33	3.00	30.00	72.20
14:31:40	2.40	3.00	30.00	72.00
14:31:50	2.67	2.40	30.00	72.60
14:32:00	2.50	2.00	30.00	72.00
14:32:10	2.67	2.80	30.00	72.00
14:32:20	2.40	3.00	30.00	72.00
14:32:30	3.00	2.67	30.00	72.60
14:32:40	3.00	2.67	30.00	72.17
14:32:50	3.00	2.00	29.60	72.00
14:33:00	3.00	3.00	29.60	72.00
14:33:10	3.00	3.00	29.40	72.00
14:33:20	2.40	3.33	29.33	72.00
14:33:30	2.00	3.00	29.33	72.60
14:33:40	2.80	3.00	29.60	73.00
14:33:50	3.00	3.20	29.67	73.00
14:34:00	2.67	3.00	29.80	73.00
14:34:10	2.67	3.00	29.33	72.50
14:34:20	2.00	3.25	29.20	72.33
14:34:30	3.00	4.00	29.33	72.80
14:34:40	3.00	4.00	29.40	73.00

Time	PM2.5	PM10	Temp	Humd
14:34:50	3.33	3.80	29.00	73.00
14:35:00	3.00	3.67	29.00	73.00
14:35:10	3.00	3.75	29.75	73.00
14:35:20	3.20	3.40	29.00	73.00
14:35:30	3.00	3.20	29.00	73.40
14:35:40	3.00	3.75	29.00	74.00
14:35:50	3.25	3.00	29.00	74.00
14:36:00	4.00	3.50	29.00	74.00
14:36:10	4.00	3.67	29.00	74.60
14:36:20	3.80	3.25	29.20	75.33
14:36:30	3.67	3.17	29.00	76.00
14:36:40	3.75	3.60	29.00	75.67
14:36:50	3.40	3.20	29.00	75.00
14:37:00	3.20	3.80	29.17	75.00
14:37:10	3.75	3.60	29.00	75.00
14:37:20	3.00	4.00	29.00	75.50
14:37:30	3.50	3.75	29.00	75.50
14:37:40	3.67	3.80	29.00	75.67
14:37:50	3.25	3.80	29.00	76.17
14:38:00	3.17	5.00	29.00	76.25
14:38:10	3.60	5.20	29.00	76.00
14:38:20	3.20	5.00	29.00	76.00
14:38:30	3.80	4.60	29.00	75.40
14:38:40	3.60	4.00	29.00	75.40
14:38:50	4.00	4.33	29.00	76.20
14:39:00	3.75	4.25	29.00	76.40
14:39:10	3.80	4.50	29.00	76.75
14:39:20	3.80	4.00	29.00	76.00
14:39:30	5.00	3.33	29.00	76.20
14:39:40	5.20	4.00	29.00	76.00
14:39:50	5.00	4.00	29.00	76.00
14:40:00	4.60	4.20	29.00	76.00
14:40:10	4.00	4.00	29.00	76.00
14:40:20	4.33	4.33	29.00	76.00
14:40:30	4.25	4.00	29.00	76.00
14:40:40	4.50	4.67	29.00	76.25
14:40:50	4.00	4.00	29.00	77.00
14:41:00	3.33	4.00	29.00	77.00

Time	PM2.5	PM10	Temp	Humd
14:41:10	4.00	5.00	29.00	76.33
14:41:20	4.00	4.33	29.00	76.00
14:41:30	4.17	4.33	29.17	76.00
14:41:40	4.00	4.00	29.00	77.20
14:41:50	4.33	4.00	29.00	77.50
14:42:00	4.00	4.00	29.00	77.00
14:42:10	4.67	4.00	29.00	77.00
14:42:20	4.00	4.00	29.00	77.00
14:42:30	4.00	4.00	29.00	76.60
14:42:40	5.00	4.20	29.00	77.00
14:42:50	4.33	4.00	29.00	77.00
14:43:00	4.33	4.20	29.00	77.00
14:43:10	4.00	4.00	29.00	76.00
14:43:20	4.00	4.00	29.00	76.25
14:43:30	4.00	4.40	29.00	77.00
14:43:40	4.00	4.00	29.00	76.40
14:43:50	4.00	4.00	29.00	76.00
14:44:00	4.00	3.80	29.00	75.80
14:44:10	4.20	4.50	29.00	76.00
14:44:20	4.00	4.40	29.00	76.00
14:44:30	4.20	4.75	29.00	76.00
14:44:40	4.00	4.60	29.00	76.40
14:44:50	4.00	4.40	29.40	77.00
14:45:00	4.40	4.25	29.00	76.50
14:45:10	4.00	4.60	29.00	77.00
14:45:20	4.00	5.00	29.00	76.17
14:45:30	3.80	4.17	29.00	76.00
14:45:40	4.50	4.00	29.00	76.00
14:45:50	4.40	4.83	29.00	76.17
14:46:00	4.75	4.67	29.00	76.00
14:46:10	4.60	4.50	29.00	76.00
14:46:20	4.40	4.17	29.00	76.00
14:46:30	4.25	4.00	29.00	76.20
14:46:40	4.60	4.00	29.17	76.00
14:46:50	5.00	5.00	29.00	76.00
14:47:00	4.17	4.80	29.00	75.40
14:47:10	4.00	5.00	29.00	76.00
14:47:20	5.00	5.00	29.00	76.00

Time	PM2.5	PM10	Temp	Humd
14:47:30	4.67	4.33	29.00	76.17
14:47:40	4.50	5.00	29.00	76.00
14:47:50	4.17	4.40	29.00	75.25
14:48:00	4.00	4.00	29.00	75.17
14:48:10	4.00	4.20	29.00	75.60
14:48:20	5.00	5.00	29.00	76.00
14:48:30	4.80	4.60	29.00	75.83
14:48:40	5.00	5.00	29.00	76.00
14:48:50	5.00	4.60	29.00	76.40
14:49:00	4.33	5.33	29.00	76.40
14:49:10	5.00	5.00	29.00	77.00
14:49:20	4.40	5.00	29.00	77.00
14:49:30	4.00	5.00	29.00	77.60
14:49:40	4.20	4.80	29.00	78.00
14:49:50	5.00	4.60	29.00	78.00
14:50:00	4.60	5.00	29.00	77.33
14:50:10	5.00	5.33	29.00	77.00
14:50:20	4.60	5.00	29.00	77.00
14:50:30	5.33	5.83	29.00	77.00
14:50:40	5.00	5.00	29.00	77.00
14:50:50	5.00	4.83	29.00	77.40
14:51:00	5.00	5.33	29.00	77.17
14:51:10	4.80	5.50	29.00	76.80
14:51:20	4.60	5.17	29.00	77.00
14:51:30	5.00	5.00	29.00	77.00
14:51:40	5.33	5.00	29.00	77.00
14:51:50	5.00	5.00	29.00	77.00
14:52:00	5.83	5.00	29.00	76.60
14:52:10	5.00	5.00	29.00	77.00
14:52:20	4.83	5.00	29.00	77.00
14:52:30	5.33	5.33	29.00	77.00
14:52:40	5.50	5.60	29.00	77.17
14:52:50	5.17	5.50	29.00	77.50
14:53:00	5.00	4.60	29.00	77.50
14:53:10	5.00	4.83	29.00	77.40
14:53:20	5.00	4.67	29.00	77.83
14:53:30	5.00	4.00	29.00	77.33
14:53:40	5.00	4.17	29.00	77.50

Time	PM2.5	PM10	Temp	Humd
14:53:50	5.00	4.40	29.00	77.60
14:54:00	5.33	4.33	29.00	77.67
14:54:10	5.60	4.20	29.00	77.67
14:54:20	5.50	4.50	29.00	77.60
14:54:30	4.67	4.17	29.00	78.00
14:54:40	4.80	4.60	29.00	78.00
14:54:50	4.67	4.33	29.00	78.00
14:55:00	4.00	4.60	29.00	77.33
14:55:10	4.17	4.67	29.00	77.00
14:55:20	4.40	4.50	29.00	77.00
14:55:30	4.33	5.00	29.00	76.60
14:55:40	4.20	5.00	29.00	77.00
14:55:50	4.50	4.83	29.00	77.40
14:56:00	4.17	5.00	29.00	78.17
14:56:10	4.60	5.00	29.00	78.33
14:56:20	4.33	4.67	29.00	78.20
14:56:30	4.60	4.00	29.00	78.33
14:56:40	4.67	4.00	29.00	78.20
14:56:50	4.50	4.00	29.00	78.17
14:57:00	5.00	4.50	29.00	78.75
14:57:10	5.00	4.17	29.00	78.00
14:57:20	4.80	4.75	29.00	78.20
14:57:30	5.00	5.00	29.00	77.67
14:57:40	5.00	4.75	29.00	78.17
14:57:50	4.67	4.83	29.00	78.40
14:58:00	4.00	4.80	29.00	77.17
14:58:10	4.00	4.80	29.00	78.00
14:58:20	4.00	5.00	29.00	78.50
14:58:30	4.50	4.40	29.00	79.20
14:58:40	4.17	4.17	29.00	78.33
14:58:50	4.75	4.20	29.00	77.33
14:59:00	5.00	4.75	29.00	76.25
14:59:10	4.75	4.20	29.00	76.50
14:59:20	4.83	4.00	29.00	77.00
14:59:30	4.80	4.00	29.00	76.17
14:59:40	4.80	5.40	29.00	76.60
14:59:50	5.00	4.80	29.00	76.60
15:00:00	4.40	5.00	29.00	76.50

Time	PM2.5	PM10	Temp	Humd
15:00:10	4.17	5.17	29.00	76.00
15:00:20	4.20	5.00	29.00	76.50
15:00:30	4.75	5.17	29.00	78.60
15:00:40	4.20	5.20	29.00	77.00
15:00:50	4.00	4.50	29.00	78.00
15:01:00	4.00	4.80	29.00	78.17
15:01:10	5.40	5.00	29.00	77.60
15:01:20	4.80	5.00	29.00	79.20
15:01:30	5.00	4.80	29.00	78.60
15:01:40	5.17	4.50	29.00	77.00
15:01:50	5.00	4.60	29.00	78.83
15:02:00	5.17	4.80	29.00	79.40
15:02:10	5.20	4.60	29.00	79.33
15:02:20	4.50	5.20	29.00	78.80
15:02:30	4.80	4.83	29.00	78.00
15:02:40	5.00	5.00	29.00	78.00
15:02:50	5.00	5.50	29.00	77.40
15:03:00	4.80	5.00	29.00	77.80
15:03:10	4.50	5.67	29.00	78.80
15:03:20	4.60	5.00	29.00	79.17
15:03:30	4.80	4.20	29.00	78.60
15:03:40	4.60	4.40	29.00	77.00
15:03:50	5.20	4.80	29.00	76.60
15:04:00	4.83	4.83	29.00	76.20
15:04:10	5.00	5.00	29.00	77.00
15:04:20	5.50	5.00	29.00	77.00
15:04:30	5.00	5.20	29.00	78.00
15:04:40	5.67	5.00	29.00	77.80
15:04:50	5.00	5.00	29.00	77.00
15:05:00	4.20	5.00	29.00	77.00
15:05:10	4.40	5.00	29.00	77.20
15:05:20	4.80	5.20	29.00	77.00
15:05:30	4.83	5.33	29.00	77.20
15:05:40	5.00	5.00	29.00	78.17
15:05:50	5.00	5.20	29.00	77.60
15:06:00	5.20	5.50	29.00	77.50
15:06:10	5.00	5.20	29.00	77.20
15:06:20	5.00	4.40	29.00	77.83

Time	PM2.5	PM10	Temp	Humd
15:06:30	5.00	5.40	29.00	78.40
15:06:40	5.00	5.17	29.00	79.80
15:06:50	5.20	5.40	29.00	78.17
15:07:00	5.33	5.33	29.00	78.60
15:07:10	5.00	5.80	29.00	79.00
15:07:20	5.20	5.60	29.00	79.00
15:07:30	5.50	4.83	29.00	78.00
15:07:40	5.20	4.50	29.00	77.83
15:07:50	4.40	5.00	29.00	77.60
15:08:00	5.40	5.00	29.00	78.00
15:08:10	5.17	5.67	29.00	77.60
15:08:20	5.40	5.75	29.00	77.00
15:08:30	5.33	5.50	29.00	77.00
15:08:40	5.80	5.50	29.00	78.00
15:08:50	5.40	5.25	29.00	78.40
15:09:00	4.83	5.40	29.00	79.40
15:09:10	4.50	5.80	29.00	79.33
15:09:20	5.00	5.25	29.00	79.25
15:09:30	5.00	5.67	29.00	78.50
15:09:40	5.67	5.33	29.00	77.80
15:09:50	5.75	5.33	29.00	77.67
15:10:00	5.50	5.00	29.00	77.25
15:10:10	5.50	5.50	29.00	78.50
15:10:20	5.25	5.00	29.00	80.00
15:10:30	5.40	5.60	29.00	78.25
15:10:40	5.80	5.40	29.00	77.80
15:10:50	5.25	5.25	29.00	77.80
15:11:00	5.67	6.00	29.00	80.25
15:11:10	5.33	6.00	29.00	80.00
15:11:20	5.33	5.33	29.00	78.83
15:11:30	5.00	5.60	29.00	79.17
15:11:40	5.50	5.40	29.00	79.40
15:11:50	5.00	5.80	29.00	79.00
15:12:00	5.60	5.33	29.00	79.50
15:12:10	5.40	5.50	29.00	78.80
15:12:20	5.25	4.67	29.00	77.80
15:12:30	6.00	5.40	29.00	78.00
15:12:40	6.00	5.00	29.00	77.80

Time	PM2.5	PM10	Temp	Humd
15:12:50	5.33	5.83	29.00	78.80
15:13:00	5.60	5.80	29.00	79.33
15:13:10	5.40	5.20	29.00	78.60
15:13:20	5.80	5.50	29.00	79.00
15:13:30	5.33	5.67	29.00	78.60
15:13:40	5.50	5.60	29.00	79.00
15:13:50	4.67	5.25	29.00	79.00
15:14:00	5.40	6.00	29.00	79.17
15:14:10	5.00	5.40	29.00	78.80
15:14:20	5.83	5.33	29.00	78.00
15:14:30	5.80	5.40	29.00	78.50
15:14:40	5.20	5.17	29.00	78.00
15:14:50	5.50	6.00	29.00	78.40
15:15:00	5.67	5.40	29.00	78.00
15:15:10	5.60	5.33	29.00	78.00
15:15:20	5.25	5.20	29.00	77.80
15:15:30	6.00	5.33	29.00	78.00
15:15:40	5.40	5.60	29.00	78.33
15:15:50	5.33	5.00	29.00	80.00
15:16:00	5.40	5.20	29.00	79.67
15:16:10	5.17	5.50	29.00	80.00
15:16:20	5.80	4.83	29.00	79.83
15:16:30	5.50	5.60	29.00	80.00
15:16:40	5.33	5.83	29.00	79.60
15:16:50	5.20	5.80	29.00	79.17
15:17:00	5.33	6.00	29.00	80.00
15:17:10	5.60	6.00	29.00	80.00
15:17:20	5.00	5.67	29.00	80.80
15:17:30	5.20	5.00	29.00	79.80
15:17:40	5.50	5.17	29.00	79.00
15:17:50	4.83	5.00	29.00	78.50
15:18:00	5.60	5.50	28.80	78.17
15:18:10	5.83	5.50	28.83	78.60
15:18:20	5.80	5.20	28.60	79.00
15:18:30	6.00	5.50	28.83	79.00
15:18:40	6.00	5.20	29.00	79.17
15:18:50	5.67	5.00	29.00	78.80
15:19:00	5.00	5.17	29.00	78.83

Time	PM2.5	PM10	Temp	Humd
15:19:10	5.17	6.00	29.00	78.60
15:19:20	5.00	5.20	29.00	78.50
15:19:30	5.50	5.67	29.00	78.33
15:19:40	5.50	5.20	29.00	78.00
15:19:50	5.20	5.80	29.00	78.17
15:20:00	5.50	5.17	28.80	79.00
15:20:10	5.20	5.80	29.00	78.83
15:20:20	5.00	5.80	29.00	79.40
15:20:30	5.17	5.17	29.00	79.00
15:20:40	6.00	5.00	29.00	79.00
15:20:50	5.20	5.50	28.83	78.80
15:21:00	5.67	5.50	28.80	81.20
15:21:10	5.20	5.40	28.60	80.67
15:21:20	5.80	5.80	28.33	79.80
15:21:30	5.17	5.40	29.00	79.20
15:21:40	5.80	6.00	29.00	79.67
15:21:50	5.80	6.00	28.75	79.00
15:22:00	5.17	6.00	28.80	78.20
15:22:10	5.00	6.20	29.00	78.50
15:22:20	5.50	5.67	29.00	79.20
15:22:30	5.50	5.80	29.00	79.00
15:22:40	5.40	5.50	28.80	78.75
15:22:50	5.80	6.00	28.83	78.80
15:23:00	5.40	5.67	28.60	79.60
15:23:10	6.00	5.50	28.67	79.60
15:23:20	6.00	6.00	29.00	79.00
15:23:30	6.00	6.00	29.00	78.80
15:23:40	6.20	5.60	29.00	79.00
15:23:50	5.67	5.67	28.83	78.60
15:24:00	5.80	5.60	29.00	78.50
15:24:10	5.50	5.00	28.80	78.80
15:24:20	6.00	5.80	28.00	79.17
15:24:30	5.60	6.00	28.20	79.40
15:24:40	5.50	6.00	28.17	80.17
15:24:50	6.00	5.00	28.20	80.67
15:25:00	6.00	5.00	28.80	80.00
15:25:10	5.60	5.75	28.60	78.00
15:25:20	5.67	5.67	28.60	78.20

Time	PM2.5	PM10	Temp	Humd
15:25:30	5.60	6.17	28.67	78.83
15:25:40	5.00	5.60	28.80	78.60
15:25:50	5.80	5.50	29.00	79.00
15:26:00	6.00	5.40	29.00	78.60
15:26:10	6.00	5.50	28.83	78.60
15:26:20	5.00	5.00	28.67	78.67
15:26:30	5.00	5.40	28.80	78.80
15:26:40	5.75	6.00	28.50	79.00
15:26:50	5.67	5.75	28.20	79.00
15:27:00	6.17	5.40	28.67	78.83
15:27:10	5.60	5.80	28.80	78.67
15:27:20	5.50	5.50	28.80	78.80
15:27:30	5.40	5.00	28.83	78.50
15:27:40	5.50	5.33	28.50	78.20
15:27:50	5.00	5.20	28.60	78.67
15:28:00	5.40	5.00	28.40	78.80
15:28:10	6.00	5.00	28.33	78.80
15:28:20	5.75	5.00	28.33	78.83
15:28:30	5.40	5.17	28.83	78.50
15:28:40	5.80	5.40	28.80	79.00
15:28:50	5.50	5.00	28.67	79.00
15:29:00	5.00	5.00	28.20	78.33
15:29:10	5.33	5.00	28.00	78.33
15:29:20	5.17	4.33	28.50	78.83
15:29:30	5.00	5.00	28.00	78.80
15:29:40	5.00	4.80	28.60	78.50
15:29:50	5.00	4.00	28.25	77.20
15:30:00	5.17	4.50	28.40	77.20
15:30:10	5.40	4.75	28.33	78.50
15:30:20	5.00	4.80	28.60	78.20
15:30:30	5.00	5.20	28.60	79.60
15:30:40	5.00	4.60	28.00	78.50
15:30:50	4.33	5.00	28.50	79.40
15:31:00	5.00	5.00	28.25	78.67
15:31:10	4.80	4.83	28.80	78.80
15:31:20	4.00	5.00	28.40	79.40
15:31:30	4.50	5.00	28.20	78.75
15:31:40	4.60	5.50	28.00	79.50

Time	PM2.5	PM10	Temp	Humd
15:31:50	5.00	5.25	28.40	78.75
15:32:00	5.20	5.17	28.67	79.40
15:32:10	4.60	5.00	28.40	78.60
15:32:20	5.00	5.17	28.17	78.60
15:32:30	5.00	5.00	28.17	78.20
15:32:40	4.83	5.00	28.25	78.40
15:32:50	5.00	4.60	28.17	78.17
15:33:00	5.00	5.17	28.00	78.00
15:33:10	5.50	5.00	28.33	77.50
15:33:20	5.25	5.00	28.40	77.33
15:33:30	5.17	5.17	28.50	77.25
15:33:40	5.00	5.00	28.40	77.17
15:33:50	5.17	5.17	28.17	78.00
15:34:00	5.00	5.00	28.00	78.00
15:34:10	5.00	5.00	28.00	78.20
15:34:20	4.60	4.50	28.17	77.83
15:34:30	5.17	5.50	28.00	79.20
15:34:40	5.00	5.17	28.17	78.33
15:34:50	5.00	5.25	28.25	76.40
15:35:00	5.17	5.80	28.17	77.60
15:35:10	5.00	5.00	28.00	77.50
15:35:20	5.17	5.83	28.00	77.80
15:35:30	5.00	5.25	28.33	78.33
15:35:40	5.00	5.33	28.25	78.00
15:35:50	4.50	5.83	28.20	77.33
15:36:00	5.50	7.00	28.40	77.00
15:36:10	5.17	6.40	28.17	77.25
15:36:20	5.25	6.20	28.00	78.50
15:36:30	5.80	6.17	28.17	78.25
15:36:40	5.00	5.80	28.17	77.00
15:36:50	5.83	6.40	28.00	77.40
15:37:00	5.25	6.20	28.20	78.17
15:37:10	5.33	5.83	28.20	78.50
15:37:20	5.83	6.00	28.33	78.33
15:37:30	7.00	5.80	28.00	78.50
15:37:40	6.40	6.25	28.20	77.75
15:37:50	6.20	5.80	28.00	77.40
15:38:00	6.17	6.00	28.00	78.00

Time	PM2.5	PM10	Temp	Humd
15:38:10	5.80	7.00	28.17	78.33
15:38:20	6.40	6.50	28.20	78.60
15:38:30	6.17	7.00	28.00	77.80
15:38:40	5.80	7.00	28.00	76.40
15:38:50	6.00	7.00	28.20	76.17
15:39:00	5.80	6.20	28.25	76.83
15:39:10	6.25	6.20	28.33	76.20
15:39:20	5.80	6.00	28.17	77.25
15:39:30	6.00	6.00	28.25	77.40
15:39:40	7.00	6.00	28.33	76.20
15:39:50	6.50	6.00	28.20	76.75
15:40:00	7.00	6.00	28.20	76.83
15:40:10	7.00	6.00	28.40	76.50
15:40:20	7.00	6.33	28.20	77.00
15:40:30	6.20	6.20	28.40	76.50
15:40:40	6.20	7.00	28.17	76.80
15:40:50	6.00	7.00	28.00	76.80
15:41:00	6.00	7.00	28.00	77.20
15:41:10	6.00	7.17	28.00	77.20
15:41:20	6.00	7.25	28.20	78.40
15:41:30	6.00	7.00	28.00	77.17
15:41:40	6.00	8.25	28.00	76.67
15:41:50	6.33	7.33	28.00	76.80
15:42:00	6.20	8.00	28.00	76.50
15:42:10	7.00	6.60	28.00	77.00
15:42:20	7.00	6.67	28.00	75.83
15:42:30	7.00	6.25	28.00	75.75
15:42:40	7.17	6.67	28.00	76.00
15:42:50	7.25	6.75	28.00	75.83
15:43:00	7.00	6.83	28.00	76.00
15:43:10	8.25	6.00	28.00	76.00
15:43:20	7.33	6.40	28.00	77.00
15:43:30	8.00	6.33	28.00	76.17
15:43:40	6.60	5.60	28.00	76.00
15:43:50	6.67	6.33	28.00	76.00
15:44:00	6.25	6.80	28.00	76.17
15:44:10	6.67	6.60	28.00	76.00
15:44:20	6.75	6.25	28.00	76.67

Time	PM2.5	PM10	Temp	Humd
15:44:30	6.83	6.00	28.00	77.00
15:44:40	6.00	6.17	28.00	76.50
15:44:50	6.40	7.00	28.00	77.60
15:45:00	6.33	5.50	28.00	76.80
15:45:10	5.60	6.00	28.00	76.50
15:45:20	6.33	6.00	28.00	77.60
15:45:30	6.80	6.25	28.00	76.50
15:45:40	6.60	6.17	28.00	76.00
15:45:50	6.25	6.60	28.00	75.80
15:46:00	6.00	6.40	28.00	76.75
15:46:10	6.17	6.67	28.00	77.50
15:46:20	7.00	6.50	28.00	77.67
15:46:30	5.50	5.67	28.00	78.00
15:46:40	6.00	6.00	28.00	78.33
15:46:50	6.00	5.20	28.00	77.40
15:47:00	6.25	5.20	28.00	77.50
15:47:10	6.17	4.20	28.00	78.00
15:47:20	6.60	4.60	28.00	77.50
15:47:30	6.40	5.00	28.00	78.40
15:47:40	6.67	5.00	28.00	76.80
15:47:50	6.50	5.00	28.00	78.17
15:48:00	5.67	4.83	28.00	79.75
15:48:10	6.00	4.60	28.00	78.00
15:48:20	5.20	5.00	28.00	77.00
15:48:30	5.20	4.17	28.00	76.20
15:48:40	4.20	4.20	28.00	75.40
15:48:50	4.60	4.50	28.00	75.40
15:49:00	5.00	4.80	28.00	76.40
15:49:10	5.00	4.67	28.00	77.40
15:49:20	5.00	4.25	28.00	76.67
15:49:30	4.83	4.67	28.00	76.00
15:49:40	4.67	4.60	28.00	75.83
15:49:50	5.00	5.25	28.00	76.80
15:50:00	4.17	5.00	28.00	77.67
15:50:10	4.20	4.60	28.00	78.50
15:50:20	4.50	4.20	28.00	76.40
15:50:30	4.80	4.20	28.00	76.17
15:50:40	4.67	4.50	28.00	75.80

Time	PM2.5	PM10	Temp	Humd
15:50:50	4.20	4.00	28.00	75.67
15:51:00	4.80	5.00	28.00	76.25
15:51:10	4.60	4.67	28.00	75.83
15:51:20	5.25	4.00	28.00	75.80
15:51:30	5.00	4.67	28.00	75.25
15:51:40	4.60	5.00	28.00	75.00
15:51:50	4.20	4.83	28.00	76.40
15:52:00	4.20	4.80	28.00	76.40
15:52:10	4.50	4.50	28.00	76.00
15:52:20	4.00	4.17	28.00	77.83
15:52:30	5.00	4.40	28.00	77.80
15:52:40	4.67	4.33	28.00	77.80
15:52:50	4.00	4.00	28.00	76.17
15:53:00	4.67	4.17	28.00	75.20
15:53:10	5.00	4.40	28.00	76.33
15:53:20	4.83	4.33	28.00	76.50
15:53:30	4.80	3.83	28.00	75.00
15:53:40	4.50	3.60	28.00	75.00
15:53:50	4.17	4.40	28.00	75.00
15:54:00	4.40	4.25	28.00	76.00
15:54:10	4.33	4.00	28.00	75.00
15:54:20	4.00	4.60	28.00	74.33
15:54:30	4.17	4.00	28.00	74.20
15:54:40	4.40	4.00	28.00	76.00
15:54:50	4.33	3.75	28.00	76.60
15:55:00	3.83	3.67	28.00	76.17
15:55:10	3.60	4.00	28.00	76.17
15:55:20	4.40	4.00	28.00	75.40
15:55:30	4.25	4.00	28.00	74.60
15:55:40	4.00	4.50	28.00	76.00
15:55:50	4.60	4.00	28.00	76.00
15:56:00	4.00	4.00	28.00	74.80
15:56:10	4.00	4.20	28.00	74.67
15:56:20	3.75	4.00	28.00	74.00
15:56:30	3.67	4.00	28.00	74.25
15:56:40	4.00	4.00	28.00	74.50
15:56:50	4.00	4.20	28.00	74.00
15:57:00	4.00	4.00	28.00	74.20

Time	PM2.5	PM10	Temp	Humd
15:57:10	4.50	4.00	28.00	74.00
15:57:20	4.00	4.00	28.00	73.83
15:57:30	4.00	3.80	28.00	74.00
15:57:40	4.20	4.20	28.00	74.00
15:57:50	4.00	4.00	28.00	74.60
15:58:00	4.00	4.00	28.00	75.00
15:58:10	4.00	4.40	28.00	74.33
15:58:20	4.20	4.00	28.00	74.00
15:58:30	4.00	4.00	28.00	74.20
15:58:40	4.00	4.50	28.00	75.80
15:58:50	4.00	4.20	28.00	74.67
15:59:00	3.80	5.00	28.00	73.67
15:59:10	4.20	4.60	28.00	73.00
15:59:20	4.00	5.00	28.00	74.40
15:59:30	4.00	5.00	28.00	73.60
15:59:40	4.40	5.00	28.00	73.80
15:59:50	4.00	4.60	28.00	73.00
16:00:00	4.00	5.20	28.00	73.60
16:00:10	4.50	5.00	28.00	73.80
16:00:20	4.20	5.00	28.00	74.00
16:00:30	5.00	5.00	28.00	74.00
16:00:40	4.60	5.00	28.00	72.25
16:00:50	5.00	4.75	28.00	73.80
16:01:00	5.00	5.00	28.00	75.00
16:01:10	5.00	4.83	28.00	75.83
16:01:20	4.60	5.25	28.00	76.17
16:01:30	5.20	4.50	28.00	76.00
16:01:40	5.00	5.00	28.00	77.00
16:01:50	5.00	5.00	28.00	77.00
16:02:00	5.00	5.20	28.00	76.00
16:02:10	5.00	5.00	28.00	75.00
16:02:20	4.75	5.00	28.00	76.40
16:02:30	5.00	5.20	28.00	75.75
16:02:40	4.83	5.83	28.00	74.40
16:02:50	5.25	5.00	28.00	74.83
16:03:00	4.50	5.33	28.00	76.75
16:03:10	5.00	4.50	28.00	75.50
16:03:20	5.00	4.40	28.00	75.00

Time	PM2.5	PM10	Temp	Humd
16:03:30	5.20	4.67	28.00	75.00
16:03:40	5.00	5.50	28.00	75.00
16:03:50	5.00	4.50	28.00	74.00
16:04:00	5.20	4.67	28.00	74.00
16:04:10	5.83	4.00	28.00	74.60
16:04:20	5.00	4.20	28.00	74.00
16:04:30	5.33	4.60	28.00	73.00
16:04:40	4.50	4.40	28.00	73.00
16:04:50	4.40	5.00	28.00	72.50
16:05:00	4.67	4.20	28.00	73.00
16:05:10	5.50	4.33	28.00	73.00
16:05:20	4.50	4.75	28.00	73.00
16:05:30	4.67	4.80	28.00	74.00
16:05:40	4.00	4.20	28.00	74.33
16:05:50	4.20	4.83	28.00	73.50
16:06:00	4.60	4.20	28.00	73.00
16:06:10	4.40	4.00	28.00	73.60
16:06:20	5.00	4.40	28.00	73.80
16:06:30	4.20	4.17	28.00	73.00
16:06:40	4.33	4.40	28.00	73.20
16:06:50	4.75	4.20	28.00	74.67
16:07:00	4.80	3.80	28.00	73.75
16:07:10	4.20	4.00	28.00	72.20
16:07:20	4.83	4.83	28.00	72.60
16:07:30	4.20	4.60	28.00	73.00
16:07:40	4.00	4.33	28.00	75.00
16:07:50	4.40	4.50	28.00	74.00
16:08:00	4.17	4.00	28.00	73.20
16:08:10	4.40	4.20	28.00	74.33
16:08:20	4.20	4.80	28.00	73.20
16:08:30	3.80	4.50	28.00	73.60
16:08:40	4.00	4.00	28.00	73.00
16:08:50	4.83	4.40	28.00	73.75
16:09:00	4.60	4.40	28.00	74.67
16:09:10	4.33	4.40	28.00	75.80
16:09:20	4.50	4.00	28.00	74.67
16:09:30	4.00	5.00	28.00	73.83
16:09:40	4.20	4.40	28.00	74.60

Time	PM2.5	PM10	Temp	Humd
16:09:50	4.80	5.00	28.00	74.40
16:10:00	4.50	5.25	28.00	74.00
16:10:10	4.00	5.50	28.00	74.00
16:10:20	4.40	5.50	28.00	73.20
16:10:30	4.40	5.33	28.00	72.00
16:10:40	4.40	5.80	28.00	72.00
16:10:50	4.00	5.60	28.00	72.60
16:11:00	5.00	5.60	28.00	73.00
16:11:10	4.40	6.20	28.00	73.00
16:11:20	5.00	5.40	28.00	72.20
16:11:30	5.25	5.67	28.00	74.40
16:11:40	5.50	4.83	28.00	74.25
16:11:50	5.50	5.20	28.00	72.50
16:12:00	5.33	5.60	28.00	72.50
16:12:10	5.80	5.00	28.00	74.00
16:12:20	5.60	5.67	28.00	74.00
16:12:30	5.60	5.60	28.00	74.00
16:12:40	6.20	5.67	28.00	75.00
16:12:50	5.40	6.00	28.00	74.80
16:13:00	5.67	5.75	28.00	74.60
16:13:10	4.83	5.80	28.00	73.50
16:13:20	5.20	5.50	28.00	73.17
16:13:30	5.60	5.50	28.00	73.00
16:13:40	5.00	5.75	28.00	73.00
16:13:50	5.67	5.67	28.00	73.00
16:14:00	5.60	6.20	28.00	73.00
16:14:10	5.67	6.00	28.00	73.80
16:14:20	6.00	6.33	28.00	74.00
16:14:30	5.75	5.20	28.00	73.00
16:14:40	5.80	5.33	28.00	74.00
16:14:50	5.50	5.60	28.00	73.00
16:15:00	5.50	6.00	28.00	72.25
16:15:10	5.75	5.00	28.00	72.00
16:15:20	5.67	5.40	28.00	72.00
16:15:30	6.17	5.83	28.00	72.00
16:15:40	6.00	5.60	28.00	73.60
16:15:50	6.33	5.67	28.00	74.67
16:16:00	5.20	5.60	28.00	75.00

Time	PM2.5	PM10	Temp	Humd
16:16:10	5.33	5.60	28.00	73.60
16:16:20	5.60	6.00	28.00	73.33
16:16:30	6.00	6.00	28.00	74.00
16:16:40	5.00	5.50	28.00	73.20
16:16:50	5.40	5.00	28.00	73.40
16:17:00	5.83	5.60	28.00	72.60
16:17:10	5.60	6.00	28.00	72.50
16:17:20	5.67	6.00	28.00	73.00
16:17:30	5.60	6.00	28.00	73.17
16:17:40	5.60	5.83	28.00	74.20
16:17:50	6.00	5.33	28.00	74.00
16:18:00	6.00	5.25	28.00	74.00
16:18:10	5.50	5.80	28.00	74.00
16:18:20	5.00	5.00	28.00	74.33
16:18:30	5.60	5.00	28.00	74.00
16:18:40	6.00	5.25	28.00	73.80
16:18:50	6.00	6.00	28.00	74.00
16:19:00	6.00	5.67	28.00	74.60
16:19:10	5.83	5.20	28.00	75.40
16:19:20	5.33	5.33	28.00	75.83
16:19:30	5.25	4.50	28.00	75.00
16:19:40	5.80	5.17	28.00	74.00
16:19:50	5.00	5.40	28.00	73.60
16:20:00	5.00	5.40	28.00	73.00
16:20:10	5.25	5.80	28.00	74.00
16:20:20	6.00	5.20	28.00	75.50
16:20:30	5.67	5.00	28.00	75.33
16:20:40	5.20	5.60	28.00	74.33
16:20:50	5.33	5.17	28.00	74.00
16:21:00	4.50	5.20	27.80	73.00
16:21:10	5.17	5.20	28.00	73.00
16:21:20	5.40	5.00	28.00	73.17
16:21:30	5.40	5.33	28.00	73.80
16:21:40	5.80	5.40	27.83	73.40
16:21:50	5.20	5.40	28.00	74.20
16:22:00	5.00	5.40	27.80	75.00
16:22:10	5.60	6.60	28.00	73.50
16:22:20	5.17	5.67	28.00	73.60

Time	PM2.5	PM10	Temp	Humd
16:22:30	5.20	6.00	28.00	73.67
16:22:40	5.20	5.67	28.00	73.40
16:22:50	5.00	5.80	28.00	72.80
16:23:00	5.33	5.33	27.80	73.00
16:23:10	5.40	6.00	28.00	73.00
16:23:20	5.40	5.80	28.00	73.00
16:23:30	5.40	6.00	28.00	73.20
16:23:40	6.60	6.50	28.00	73.40
16:23:50	5.67	6.17	28.00	74.80
16:24:00	6.00	6.25	28.00	76.33
16:24:10	5.67	6.33	28.00	76.00
16:24:20	5.83	7.00	28.00	76.83
16:24:30	5.20	6.20	28.00	75.20
16:24:40	6.00	6.67	28.00	75.00
16:24:50	5.80	7.00	28.00	74.60
16:25:00	6.00	6.17	28.00	74.40
16:25:10	6.50	6.60	28.00	74.67
16:25:20	6.17	6.17	28.00	75.00
16:25:30	6.25	6.75	28.00	74.83
16:25:40	6.33	6.33	28.00	73.50
16:25:50	7.00	7.00	27.67	74.00
16:26:00	6.20	6.40	28.00	74.80
16:26:10	6.67	6.50	27.67	75.00
16:26:20	7.00	6.40	27.75	75.17
16:26:30	6.17	6.33	27.83	75.60
16:26:40	6.60	6.80	28.00	74.67
16:26:50	6.17	6.50	28.00	75.80
16:27:00	6.75	6.33	27.50	75.83
16:27:10	6.33	6.80	28.00	76.00
16:27:20	7.00	6.67	27.83	75.83
16:27:30	6.40	7.00	28.00	77.00
16:27:40	6.50	7.00	27.67	76.60
16:27:50	6.40	6.80	27.67	75.17
16:28:00	6.33	7.00	27.80	74.60
16:28:10	6.80	6.75	27.67	75.17
16:28:20	6.50	6.20	27.80	74.40
16:28:30	6.33	6.50	27.67	73.50
16:28:40	6.80	7.00	27.80	74.00

Time	PM2.5	PM10	Temp	Humd
16:28:50	6.67	6.67	27.83	75.80
16:29:00	7.00	6.00	27.75	75.50
16:29:10	7.00	6.50	27.40	76.80
16:29:20	6.80	5.80	27.83	75.83
16:29:30	7.00	6.00	27.50	76.00
16:29:40	6.75	6.17	27.50	74.50
16:29:50	6.20	6.50	27.67	74.50
16:30:00	6.50	7.17	27.33	74.20
16:30:10	7.00	7.00	27.20	74.50
16:30:20	6.67	6.80	27.50	73.50
16:30:30	6.00	6.60	27.50	74.00
16:30:40	6.50	6.50	27.00	75.00
16:30:50	5.80	6.67	27.17	75.17
16:31:00	6.00	6.80	27.00	74.40
16:31:10	6.17	6.50	27.40	73.50
16:31:20	6.50	7.50	27.20	73.00
16:31:30	7.17	7.67	27.33	73.75
16:31:40	7.00	7.00	27.17	73.33
16:31:50	6.80	7.00	27.60	73.40
16:32:00	6.60	6.00	27.83	74.60
16:32:10	6.50	7.17	27.50	74.20
16:32:20	6.67	7.25	27.33	73.33
16:32:30	6.80	6.80	27.40	72.33
16:32:40	6.50	7.50	27.17	73.00
16:32:50	7.50	8.00	27.60	73.50
16:33:00	7.67	7.25	27.83	73.50
16:33:10	7.00	7.40	27.50	74.33
16:33:20	7.00	7.25	27.60	72.60
16:33:30	6.00	7.17	27.50	74.00
16:33:40	7.17	7.00	28.00	74.60
16:33:50	7.25	7.00	27.50	73.17
16:34:00	6.80	6.60	27.40	72.50
16:34:10	7.50	6.67	27.50	72.60
16:34:20	8.00	7.20	27.67	73.17
16:34:30	7.25	7.50	27.20	74.75
16:34:40	7.40	6.80	27.80	73.75
16:34:50	7.25	7.00	27.80	75.80
16:35:00	7.17	6.83	27.83	75.75

Time	PM2.5	PM10	Temp	Humd
16:35:10	7.00	6.80	27.20	76.17
16:35:20	7.00	6.80	28.00	75.20
16:35:30	6.60	7.00	28.00	75.00
16:35:40	6.67	6.80	27.50	74.20
16:35:50	7.17	6.00	27.50	76.00
16:36:00	7.60	6.75	27.40	75.00
16:36:10	6.80	7.20	27.40	76.00
16:36:20	7.00	6.80	27.00	76.80
16:36:30	6.83	6.50	27.80	74.75
16:36:40	6.80	6.00	28.00	72.67
16:36:50	6.80	6.00	27.75	73.00
16:37:00	7.00	6.20	27.40	73.40
16:37:10	6.80	6.00	27.60	72.00
16:37:20	6.00	5.67	27.50	72.80
16:37:30	6.75	6.00	27.33	73.17
16:37:40	7.20	5.83	27.40	72.75
16:37:50	6.80	5.60	27.00	73.40
16:38:00	6.50	5.60	27.00	74.20
16:38:10	6.00	6.20	27.00	73.83
16:38:20	6.00	6.00	27.00	72.50
16:38:30	6.20	6.00	27.17	71.40
16:38:40	6.00	5.60	27.00	71.40
16:38:50	5.67	6.00	27.00	71.00
16:39:00	6.00	5.83	27.00	71.50
16:39:10	5.83	6.00	27.00	71.50
16:39:20	5.60	6.83	27.40	71.00
16:39:30	5.60	6.00	27.20	72.00
16:39:40	6.20	5.80	27.67	71.00
16:39:50	6.00	6.00	27.50	71.20
16:40:00	6.00	6.33	27.20	72.00
16:40:10	5.60	6.17	27.50	73.20
16:40:20	6.00	6.00	27.00	72.20
16:40:30	5.83	6.00	27.20	72.00
16:40:40	6.00	5.60	27.20	71.83
16:40:50	6.83	6.50	27.67	71.20
16:41:00	6.00	5.60	27.00	71.17
16:41:10	5.80	6.00	27.75	70.25
16:41:20	6.00	7.00	27.00	71.20

Time	PM2.5	PM10	Temp	Humd
16:41:30	6.33	7.00	27.20	71.20
16:41:40	6.17	6.60	27.50	70.67
16:41:50	6.00	6.00	27.80	71.33
16:42:00	6.00	6.00	27.60	72.75
16:42:10	5.60	6.00	27.40	72.00
16:42:20	6.50	6.80	27.83	71.80
16:42:30	5.60	7.00	27.60	70.83
16:42:40	6.00	6.83	27.20	71.80
16:42:50	7.00	6.83	27.83	71.40
16:43:00	7.00	6.40	27.00	70.60
16:43:10	6.60	6.00	27.80	72.17
16:43:20	6.00	6.00	28.00	71.80
16:43:30	6.00	6.25	27.83	71.20
16:43:40	6.00	6.00	27.83	70.83
16:43:50	6.80	6.17	27.40	70.80
16:44:00	7.00	6.40	27.40	72.20
16:44:10	6.83	6.00	27.50	71.67
16:44:20	6.83	6.00	27.25	71.50
16:44:30	6.40	6.00	27.75	72.33
16:44:40	6.00	5.83	27.33	71.60
16:44:50	6.00	6.00	27.40	71.40
16:45:00	6.25	5.83	27.60	71.75
16:45:10	6.00	6.40	27.33	71.00
16:45:20	6.17	6.67	27.00	70.75
16:45:30	6.17	6.50	27.50	71.33
16:45:40	6.25	6.00	27.80	71.40
16:45:50	6.00	6.00	27.83	71.20
16:46:00	6.00	6.00	27.80	71.17
16:46:10	5.83	6.00	27.50	70.00
16:46:20	6.00	6.00	27.50	70.00
16:46:30	5.83	6.00	27.50	70.80
16:46:40	6.40	6.00	27.40	71.33
16:46:50	6.67	6.67	27.25	71.80
16:47:00	6.50	6.83	27.20	70.83
16:47:10	6.00	6.40	27.60	70.50
16:47:20	6.00	6.20	27.80	69.75
16:47:30	6.00	6.20	27.40	71.80
16:47:40	6.00	6.25	28.00	72.00

Time	PM2.5	PM10	Temp	Humd
16:47:50	6.00	6.40	27.83	71.00
16:48:00	6.00	6.20	27.60	71.60
16:48:10	6.00	5.80	28.00	71.80
16:48:20	6.80	6.25	28.00	71.40
16:48:30	6.83	6.00	28.00	72.00
16:48:40	6.40	6.50	27.80	71.33
16:48:50	6.20	6.33	28.00	72.40
16:49:00	6.20	6.25	28.00	71.20
16:49:10	6.25	6.00	28.00	71.20
16:49:20	6.40	6.50	28.00	71.00
16:49:30	6.20	6.40	28.00	70.80
16:49:40	5.80	6.17	28.00	71.00
16:49:50	6.25	6.40	28.00	70.60
16:50:00	6.00	7.00	28.00	70.75
16:50:10	6.50	6.40	28.00	71.00
16:50:20	6.33	7.00	28.00	71.00
16:50:30	6.25	7.00	28.00	71.00
16:50:40	6.00	6.67	28.00	70.75
16:50:50	6.50	6.83	28.00	70.00
16:51:00	6.40	9.00	28.00	70.25
16:51:10	6.17	18.20	28.00	70.20
16:51:20	6.40	15.75	28.00	70.17
16:51:30	7.00	12.33	28.00	71.00
16:51:40	6.40	8.80	28.00	70.50
16:51:50	7.00	8.80	28.00	70.00
16:52:00	7.00	9.50	28.00	70.00
16:52:10	6.67	9.20	28.00	69.67
16:52:20	6.83	8.40	28.00	70.00
16:52:30	9.00	7.17	28.00	70.00
16:52:40	18.20	6.00	28.00	70.00
16:52:50	15.75	5.67	28.00	70.00
16:53:00	12.33	5.40	28.00	69.75
16:53:10	8.80	5.00	28.00	70.00
16:53:20	8.80	5.50	28.00	70.00
16:53:30	9.50	5.00	28.00	70.00
16:53:40	9.20	5.00	28.00	70.00
16:53:50	8.40	5.80	28.00	70.60
16:54:00	7.17	5.75	28.00	70.60

Time	PM2.5	PM10	Temp	Humd
16:54:10	6.00	8.20	28.00	70.67
16:54:20	5.67	10.75	28.00	69.50
16:54:30	5.40	19.83	28.00	69.67
16:54:40	5.00	18.33	28.00	69.00
16:54:50	5.50	21.00	28.00	69.00
16:55:00	5.00	22.75	28.00	69.00
16:55:10	5.00	20.50	28.00	69.00
16:55:20	5.80	14.50	28.00	68.60
16:55:30	5.75	12.20	28.00	69.00
16:55:40	8.20	13.75	28.00	68.75
16:55:50	10.25	7.20	28.00	69.80
16:56:00	18.50	5.83	28.00	69.50
16:56:10	17.00	5.80	28.00	70.00
16:56:20	19.50	7.00	28.00	69.33
16:56:30	21.50	7.75	28.00	69.67
16:56:40	19.50	7.20	28.00	70.00
16:56:50	13.75	5.25	28.00	69.67
16:57:00	12.20	5.00	28.00	69.25
16:57:10	13.20	5.00	28.00	68.00
16:57:20	6.25	5.00	28.00	68.00
16:57:30	5.83	6.33	28.00	69.00
16:57:40	5.80	5.25	28.00	69.00
16:57:50	7.00	5.20	28.00	68.40
16:58:00	7.75	4.00	28.00	69.00
16:58:10	7.20	4.00	28.00	69.50
16:58:20	5.25	5.33	28.00	68.60
16:58:30	5.00	5.25	21.00	69.00
16:58:40	5.00	5.00	28.00	68.75
16:58:50	5.00	5.00	28.00	68.25
16:59:00	6.33	4.40	28.00	69.00
16:59:10	5.25	4.75	28.00	69.67
16:59:20	5.20	5.00	28.25	52.00
16:59:30	4.00	5.00	28.00	67.80
16:59:40	4.00	4.50	28.00	67.00
16:59:50	5.33	5.50	28.00	68.00
17:00:00	5.25	4.20	28.00	67.67
17:00:10	5.00	4.00	28.67	67.75
17:00:20	5.00	6.60	28.00	67.00

Time	PM2.5	PM10	Temp	Humd
17:00:30	4.40	6.50	28.17	67.40
17:00:40	4.75	5.00	28.00	68.40
17:00:50	5.00	4.20	28.20	68.25
17:01:00	5.00	4.00	28.00	68.00
17:01:10	4.50	4.60	28.40	68.00
17:01:20	5.50	4.00	28.25	67.33
17:01:30	4.20	4.00	28.20	66.50
17:01:40	4.00	4.60	28.00	66.20
17:01:50	6.60	5.20	28.20	66.40
17:02:00	6.50	4.80	28.00	67.20
17:02:10	5.00	4.50	28.20	66.25
17:02:20	4.20	4.20	28.25	66.20
17:02:30	4.00	4.00	28.60	66.00
17:02:40	4.60	4.00	28.80	66.20
17:02:50	4.00	4.00	29.00	66.00
17:03:00	4.00	4.75	29.00	66.20
17:03:10	4.60	5.50	29.00	67.00
17:03:20	5.20	5.00	29.00	67.00
17:03:30	4.80	4.40	29.00	66.80
17:03:40	4.50	4.40	29.00	66.60
17:03:50	4.20	4.50	29.00	66.75
17:04:00	4.00	4.60	29.00	66.60
17:04:10	4.00	7.33	29.00	66.80
17:04:20	4.00	5.40	29.00	66.67
17:04:30	4.75	6.00	29.00	66.75
17:04:40	5.50	7.67	29.00	66.75
17:04:50	5.00	5.33	29.00	67.00
17:05:00	4.40	5.00	29.00	66.50
17:05:10	4.40	7.25	29.00	66.00
17:05:20	4.50	9.33	29.00	65.60
17:05:30	4.60	9.80	29.00	65.25
17:05:40	7.00	9.75	29.00	67.00
17:05:50	5.20	8.50	29.00	66.33
17:06:00	5.80	5.25	29.00	64.80
17:06:10	7.17	4.00	29.00	65.40
17:06:20	4.83	5.17	29.00	65.50
17:06:30	5.00	4.75	29.00	65.33
17:06:40	7.00	4.50	29.00	65.67

Time	PM2.5	PM10	Temp	Humd
17:06:50	8.67	4.00	29.00	66.00
17:07:00	9.00	5.00	29.00	66.00
17:07:10	8.75	4.25	29.00	66.00
17:07:20	8.25	4.00	29.00	66.00
17:07:30	4.60	4.00	29.00	66.00
17:07:40	4.00	4.20	29.00	65.50
17:07:50	5.17	4.17	29.00	64.20
17:08:00	4.75	4.00	29.00	64.50
17:08:10	4.50	4.00	29.00	64.25
17:08:20	4.00	3.83	29.00	64.00
17:08:30	5.00	4.00	29.00	63.00
17:08:40	4.25	3.67	29.00	63.40
17:08:50	4.00	4.25	29.00	65.00
17:09:00	4.00	6.83	29.80	64.60
17:09:10	4.20	7.00	29.50	65.00
17:09:20	4.17	6.67	29.80	64.60
17:09:30	4.00	11.00	29.83	65.17
17:09:40	4.00	14.33	29.75	65.40
17:09:50	3.83	8.60	29.83	63.20
17:10:00	4.00	5.80	30.00	64.50
17:10:10	3.67	5.00	29.83	64.00
17:10:20	4.25	5.00	30.00	63.67
17:10:30	6.83	4.67	30.00	63.75
17:10:40	7.00	5.00	30.00	64.00
17:10:50	6.67	5.60	30.00	63.25
17:11:00	10.75	5.20	30.00	63.17
17:11:10	13.33	5.33	30.00	63.50
17:11:20	7.83	6.33	30.00	63.17
17:11:30	5.50	7.20	30.00	61.20
17:11:40	5.00	7.40	30.00	62.20
17:11:50	5.00	6.40	30.00	61.00
17:12:00	4.67	5.50	30.00	60.80
17:12:10	5.00	5.40	30.00	61.33
17:12:20	5.60	4.75	30.00	61.25
17:12:30	5.20	5.50	30.00	61.00
17:12:40	5.33	5.00	30.00	62.20
17:12:50	6.33	5.50	30.00	63.17
17:13:00	7.20	5.80	30.00	62.33

Time	PM2.5	PM10	Temp	Humd
17:13:10	7.40	5.33	30.00	63.00
17:13:20	6.40	5.75	30.00	63.00
17:13:30	5.50	5.67	30.00	61.80
17:13:40	5.40	5.40	30.00	61.00
17:13:50	4.75	5.17	30.00	61.00
17:14:00	5.50	7.40	30.00	62.00
17:14:10	5.00	9.20	30.00	61.25
17:14:20	5.50	7.17	30.17	61.00
17:14:30	5.80	6.00	30.40	60.67
17:14:40	5.33	5.50	30.17	59.40
17:14:50	5.75	6.00	30.80	59.33
17:15:00	5.67	6.40	30.20	61.25
17:15:10	5.40	4.50	30.67	61.00
17:15:20	5.17	5.00	30.80	59.80
17:15:30	7.83	4.67	30.67	59.67
17:15:40	9.00	5.00	30.25	61.80
17:15:50	7.17	5.17	30.80	59.80
17:16:00	6.00	5.40	30.83	60.33
17:16:10	5.50	5.00	30.75	60.00
17:16:20	6.00	5.60	30.83	60.67
17:16:30	6.40	5.00	31.00	60.00
17:16:40	4.50	5.00	31.00	60.20
17:16:50	5.00	5.80	31.00	59.00
17:17:00	4.67	5.60	31.00	59.75
17:17:10	5.00	5.00	31.00	59.50
17:17:20	5.17	5.83	31.00	60.20
17:17:30	5.40	6.33	31.00	60.00
17:17:40	5.00	6.50	31.00	58.60
17:17:50	5.60	5.00	31.00	58.17
17:18:00	5.00	4.80	31.00	59.00
17:18:10	5.00	5.17	31.00	57.67
17:18:20	5.80	5.60	31.00	57.33
17:18:30	5.60	5.60	31.00	58.40
17:18:40	5.00	5.80	31.00	58.80
17:18:50	5.83	6.00	31.00	58.40
17:19:00	6.33	7.25	31.00	59.17
17:19:10	6.50	9.17	31.00	58.00
17:19:20	5.00	9.60	31.00	58.00

Time	PM2.5	PM10	Temp	Humd
17:19:30	4.80	9.00	31.00	57.60
17:19:40	5.17	9.50	31.00	57.17
17:19:50	5.60	8.25	31.00	58.17
17:20:00	5.60	7.00	31.00	57.00
17:20:10	5.80	6.20	31.00	57.00
17:20:20	6.00	5.50	31.00	57.40
17:20:30	7.25	7.25	31.00	57.33
17:20:40	9.17	10.33	31.00	57.25
17:20:50	9.50	9.60	31.00	58.00
17:21:00	9.00	11.20	31.00	57.60
17:21:10	9.50	12.80	31.00	56.60
17:21:20	8.25	8.17	31.00	56.83
17:21:30	7.00	6.00	31.33	57.50
17:21:40	6.20	5.80	31.40	57.17
17:21:50	5.50	6.00	31.80	57.40
17:22:00	7.25	6.00	32.00	58.00
17:22:10	10.33	7.67	32.00	57.00
17:22:20	9.40	7.00	32.00	56.83
17:22:30	10.80	5.67	32.00	57.60
17:22:40	12.33	7.00	32.00	58.00
17:22:50	7.60	6.40	32.00	56.00
17:23:00	6.00	6.80	32.00	54.67
17:23:10	5.80	5.80	32.00	54.50
17:23:20	6.00	4.67	32.00	54.80
17:23:30	6.00	5.60	32.00	54.33
17:23:40	7.67	5.00	32.00	55.00
17:23:50	7.00	5.17	32.00	54.83
17:24:00	5.67	5.33	32.00	55.00
17:24:10	7.00	6.20	32.00	54.67
17:24:20	6.40	5.80	32.00	53.80
17:24:30	6.80	5.17	32.00	55.40
17:24:40	5.80	5.00	31.83	55.20
17:24:50	4.67	5.00	31.67	55.80
17:25:00	5.60	5.17	32.00	55.50
17:25:10	5.00	5.00	32.00	55.00
17:25:20	5.17	4.67	32.00	55.00
17:25:30	5.33	4.00	32.00	55.83
17:25:40	6.20	4.00	32.00	55.67

Time	PM2.5	PM10	Temp	Humd
17:25:50	5.80	3.67	32.00	56.00
17:26:00	5.17	4.67	32.00	55.60
17:26:10	5.00	4.33	32.00	56.83
17:26:20	5.00	4.50	32.00	56.00
17:26:30	5.17	4.83	32.00	55.50
17:26:40	5.00	4.00	32.00	54.83
17:26:50	4.67	4.40	32.00	53.20
17:27:00	4.00	4.00	32.17	52.67
17:27:10	4.00	4.33	32.25	52.60
17:27:20	3.75	4.00	32.00	53.33
17:27:30	4.80	4.20	32.60	52.67
17:27:40	4.33	4.00	32.60	53.67
17:27:50	4.50	4.00	33.00	52.50
17:28:00	4.83	4.00	32.83	52.25
17:28:10	4.00	4.00	32.80	52.50
17:28:20	4.40	4.00	32.60	53.60
17:28:30	4.00	4.00	32.80	53.40
17:28:40	4.33	4.33	32.20	54.00
17:28:50	4.00	4.00	32.40	53.50
17:29:00	4.20	4.00	32.25	53.60
17:29:10	4.00	4.00	32.67	52.20
17:29:20	4.00	4.00	33.00	52.40
17:29:30	4.00	4.33	33.00	51.60
17:29:40	4.00	4.60	32.75	51.60
17:29:50	4.00	4.00	33.00	52.25
17:30:00	4.00	4.33	33.00	53.50
17:30:10	4.33	4.80	32.75	51.80
17:30:20	4.00	4.50	33.00	52.67
17:30:30	4.00	5.40	33.00	52.25
17:30:40	4.00	4.80	33.00	52.00
17:30:50	4.00	4.60	33.00	52.50
17:31:00	4.33	4.83	33.00	51.25
17:31:10	4.60	5.00	33.00	50.67
17:31:20	4.00	4.67	33.00	50.60
17:31:30	4.33	5.00	33.00	50.60
17:31:40	4.80	4.50	33.00	49.33
17:31:50	4.50	5.00	33.00	49.20
17:32:00	5.40	5.00	33.00	49.00

Time	PM2.5	PM10	Temp	Humd
17:32:10	4.80	5.00	33.00	50.00
17:32:20	4.60	5.00	33.00	50.00
17:32:30	4.83	4.60	33.00	49.80
17:32:40	5.00	4.40	33.40	49.33
17:32:50	4.67	5.00	33.00	49.00
17:33:00	5.00	4.50	33.00	49.00
17:33:10	4.50	4.60	33.00	49.83
17:33:20	5.00	4.83	33.00	49.75
17:33:30	5.00	5.00	33.00	49.00
17:33:40	5.00	4.50	32.75	49.00
17:33:50	5.00	4.80	32.83	49.00
17:34:00	4.60	4.20	32.80	49.00
17:34:10	4.40	5.00	32.83	50.00
17:34:20	5.00	5.00	33.00	50.20
17:34:30	4.50	5.17	32.67	49.75
17:34:40	4.60	5.00	33.00	50.83
17:34:50	4.83	5.00	33.00	50.80
17:35:00	5.00	5.75	33.00	50.33
17:35:10	4.50	6.00	32.40	51.00
17:35:20	4.80	6.25	32.17	50.67
17:35:30	4.20	5.60	32.60	51.40
17:35:40	5.00	5.40	32.17	51.00
17:35:50	5.00	4.80	32.25	51.00
17:36:00	5.17	4.83	32.00	51.00
17:36:10	5.00	4.40	32.25	50.33
17:36:20	5.00	4.80	32.00	50.80
17:36:30	5.75	5.00	32.20	50.67
17:36:40	6.00	5.00	32.00	50.75
17:36:50	6.20	4.50	32.00	51.17
17:37:00	5.50	5.00	32.40	51.25
17:37:10	5.40	5.00	33.00	51.00
17:37:20	4.80	4.50	33.00	51.20
17:37:30	4.83	4.80	33.00	50.00
17:37:40	4.40	4.20	33.00	49.83
17:37:50	4.80	4.83	33.00	50.20
17:38:00	5.00	4.50	33.00	50.40
17:38:10	5.00	4.50	33.00	50.00
17:38:20	4.50	5.17	33.00	50.00

Time	PM2.5	PM10	Temp	Humd
17:38:30	5.00	5.00	33.00	50.00
17:38:40	5.00	4.83	33.00	50.60
17:38:50	4.50	4.00	34.00	50.20
17:39:00	4.80	4.17	33.83	49.50
17:39:10	4.20	4.25	34.00	50.40
17:39:20	4.83	5.00	33.80	49.40
17:39:30	4.50	4.83	34.00	49.83
17:39:40	4.50	4.00	33.80	49.25
17:39:50	5.17	4.67	33.83	48.83
17:40:00	5.00	4.80	34.00	48.33
17:40:10	4.83	5.00	34.00	48.60
17:40:20	4.00	4.00	34.00	47.50
17:40:30	4.17	4.20	34.00	47.80
17:40:40	4.25	5.25	33.33	48.00
17:40:50	5.00	6.00	33.00	47.00
17:41:00	4.83	6.00	33.50	47.40
17:41:10	4.00	5.80	34.00	47.17
17:41:20	4.67	5.00	34.00	47.20
17:41:30	4.80	4.20	34.00	47.00
17:41:40	5.00	5.00	34.00	47.20
17:41:50	4.00	4.50	34.00	47.00
17:42:00	4.20	4.60	34.00	47.00
17:42:10	5.25	4.50	34.00	46.40
17:42:20	6.00	4.80	34.00	46.50
17:42:30	6.00	4.20	34.00	46.67
17:42:40	5.80	4.80	34.00	45.80
17:42:50	5.00	5.17	34.00	46.00
17:43:00	4.20	6.60	34.00	45.67
17:43:10	5.00	10.20	34.00	46.40
17:43:20	4.50	7.40	34.00	46.40
17:43:30	4.60	8.40	34.00	47.00
17:43:40	4.50	7.00	34.00	47.40
17:43:50	4.80	6.00	34.00	47.00
17:44:00	4.20	6.50	34.00	47.00
17:44:10	4.80	5.80	34.00	47.40
17:44:20	5.17	4.80	34.00	46.00
17:44:30	6.60	5.25	34.00	46.00
17:44:40	9.80	4.83	34.00	45.00

Time	PM2.5	PM10	Temp	Humd
17:44:50	7.20	4.83	34.00	45.00
17:45:00	8.40	5.20	34.00	44.20
17:45:10	7.00	5.00	34.00	44.60
17:45:20	6.00	4.75	34.00	45.00
17:45:30	6.50	5.00	34.00	45.00
17:45:40	5.80	4.00	34.00	46.00
17:45:50	4.80	4.00	34.00	45.00
17:46:00	5.25	4.33	34.00	45.20
17:46:10	4.83	4.00	34.00	45.25
17:46:20	4.83	4.00	34.00	44.50
17:46:30	5.20	4.25	34.00	44.50
17:46:40	5.00	5.20	34.00	44.20
17:46:50	4.75	5.20	34.00	43.00
17:47:00	5.00	5.00	34.00	43.50
17:47:10	4.00	4.60	34.00	44.00
17:47:20	4.00	4.20	34.00	43.50
17:47:30	4.33	4.80	34.00	44.00
17:47:40	4.00	6.00	33.20	43.00
17:47:50	4.00	5.17	33.00	43.83
17:48:00	4.25	5.00	33.60	44.20
17:48:10	5.20	6.60	34.00	45.00
17:48:20	5.20	6.60	34.00	45.20
17:48:30	5.00	5.00	34.00	45.60
17:48:40	4.60	5.20	33.67	46.00
17:48:50	4.20	5.40	34.00	46.00
17:49:00	4.80	6.17	34.00	46.20
17:49:10	6.00	4.75	34.00	46.40
17:49:20	5.17	4.60	34.00	46.00
17:49:30	5.00	4.50	33.80	46.00
17:49:40	6.60	5.00	34.00	46.20
17:49:50	6.60	6.25	34.00	46.20
17:50:00	5.00	9.60	34.00	46.40
17:50:10	5.20	12.20	33.80	46.40
17:50:20	5.40	14.33	33.75	46.00
17:50:30	6.17	13.25	33.40	46.20
17:50:40	4.75	10.80	33.75	46.33
17:50:50	4.60	6.60	33.80	47.00
17:51:00	4.50	5.50	34.00	46.00

Time	PM2.5	PM10	Temp	Humd
17:51:10	5.00	3.83	34.00	46.50
17:51:20	6.25	4.25	34.00	46.20
17:51:30	9.20	4.00	34.00	46.25
17:51:40	12.00	4.40	34.00	46.20
17:51:50	13.83	4.60	34.00	46.60
17:52:00	12.40	5.20	28.33	46.00
17:52:10	10.50	6.00	34.00	45.75
17:52:20	6.60	8.25	34.00	44.80
17:52:30	5.50	8.75	34.00	45.00
17:52:40	3.83	5.20	34.00	44.50
17:52:50	4.25	5.00	34.00	38.00
17:53:00	4.00	4.00	34.00	46.00
17:53:10	4.40	4.50	34.00	46.17
17:53:20	4.60	4.20	34.00	46.80
17:53:30	5.20	4.33	34.00	47.00
17:53:40	6.00	4.40	34.00	47.00
17:53:50	8.25	6.00	34.00	47.00
17:54:00	8.25	10.00	34.00	47.25
17:54:10	5.20	7.20	34.00	47.50
17:54:20	5.00	5.20	34.00	46.20
17:54:30	4.00	5.20	34.00	46.00
17:54:40	4.50	13.00	34.00	45.60
17:54:50	4.20	10.33	34.00	46.00
17:55:00	4.33	7.40	34.00	46.00
17:55:10	4.40	5.60	34.00	46.00
17:55:20	6.00	4.80	34.00	46.40
17:55:30	9.80	4.40	34.00	47.00

Time	PM2.5	PM10	Temp	Humd
17:55:40	7.20	4.00	34.00	47.60
17:55:50	5.20	5.00	34.00	47.00
17:56:00	5.20	4.50	34.00	47.40
17:56:10	12.40	4.00	34.00	47.20
17:56:20	9.33	4.60	34.00	47.00
17:56:30	6.80	5.00	34.00	47.33
17:56:40	5.40	5.00	34.00	47.20
17:56:50	4.40	4.60	34.00	48.00
17:57:00	4.40	5.25	34.00	48.00
17:57:10	4.00	4.67	34.00	47.80
17:57:20	5.00	4.50	34.00	48.00
17:57:30	4.50	4.00	34.00	48.75
17:57:40	4.00	5.17	34.00	48.00
17:57:50	4.60	5.00	34.00	48.00
17:58:00	5.00	5.17	34.00	48.40
17:58:10	5.00	5.00	33.83	48.20
17:58:20	4.60	4.83	34.00	49.00
17:58:30	5.25	5.00	33.83	48.80
17:58:40	4.67	5.00	34.00	49.75
17:58:50	4.50	5.67	33.83	49.83
17:59:00	4.00	5.00	34.00	50.00
17:59:10	5.17	4.83	34.00	50.00
17:59:20	5.00	5.40	34.00	50.00
17:59:30	5.17	5.60	34.00	50.00
17:59:40	5.00	5.50	34.00	50.00
17:59:50	4.83	6.75	34.00	50.75
18:00:00	5.00	6.83	28.33	51.00