# AIR QUALITY MONITORING @ 40 FEET HEIGHT – Report Date: 2.11.2022

## (BASED ON US-EPA AQI STANDARDS AND THE DAYALBAGH AQI COLOUR CODE)

Permissible Limits (24 Hour Mean): $PM_{10}$ = 150; $PM_{2.5}$ = 35, all units are in µg/$m^3$ Sampling Duration = 24 hrs (9:00 AM to 9:00 AM)

Today: 1-11-2022 to 2-11-2022 from 9:00 a.m. to 9:00 a.m. **Yesterday:** 1-11-2022 to 31 -10-2022 from 9:00 a.m. to 9:00 a.m.

| LOCATION | DAYALBAGH (TIME WEIGHTED AVERAGE DATA) | | | | | | | | | | | SANJAY PLACE (ARITHMETIC MEAN DATA) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | AQI | | | | Meteorological Parameters | | | | | | | AQI | | | | Meteorological Parameters | | | | | | |
| | $PM_{2.5}$ | | $PM_{10}$ | | | | | T °C | | | | $PM_{2.5}$ | | $PM_{10}$ | | | | | T °C | | | |
| | Today | Yesterday | Today | Yesterday | RH % | WS m/s | WD | Max | Min | SR W/$m^2$ | RF mm | Today | Yesterday | Today | Yesterday | RH % | WS m/s | WD | Max | Min | SR W/$m^2$ | RF mm |
| 4 / 97 | 165 | 174 | 93 | **120** | 64 | 0.4 | SSW | 36.0 | 18.3 | 117 | 0 | 166 | NA | 168 | NA | 53 | 0.2 | WSW | 35.4 | 21.8 | 55 | 0 |
| 3 / 34 | 174 | 179 | 91 | **105** | 64 | 0.4 | SSW | 36.0 | 18.3 | 117 | 0 | | | | | | | | | | | |
| Science Faculty | 193 | 199 | 104 | 107 | 64 | 0.4 | SSW | 36.0 | 18.3 | 117 | 0 | | | | | | | | | | | |

**Views of AQI Research Group:** Concentrations of particulate matter have decreased at all sites of Dayalbagh due to improvement in the meteorological conditions associated with increase in temperature and Solar Radiation and change in Wind Direction. The Air Quality Index w.r.t. $PM_{2.5}$ remains in the *Unhealthy for All* category at all sites of Dayalbagh while, w.r.t. $PM_{10}$ it has improved to the *Moderate* category at Vidyut Nagar and Prem Nagar but remains in the *Unhealthy for Sensitive Groups* category at Science Faculty.

*Sanjay Place data though available, values show fluctuation and the samplers are still under maintenance. We are sampling at Sanjay Place today with our device after their due permission.*

| Good 0 - 50 | Moderate 51 - 100 | Unhealthy for Sensitive Groups 101 - 150 | Unhealthy for All 151 - 200 | Very Unhealthy for All 201 - 300 | Hazardous for All 301 - 400 | Hazardous for All 401 - 500 |
|---|---|---|---|---|---|---|

NOTE: 1 A continuing study conducted as part of **Dayalbagh Sigma Six Qualities and Values Model** implementation.

2 DEI is using United States Environmental Protection Agency (USEPA) methodology and online calculators to calculate AQI. For fair comparison with UPPCB Sanjay Place Weather Station readings, their $PM_{2.5}$ concentration readings are fed in USEPA online calculator for AQI calculation.

3 Formula for AQI calculation for a Pollutant –

$$I = \frac{I_{high} - I_{low}}{C_{high} - C_{low}} * (C - C_{low}) + I_{low}$$

where: I = Air Quality Index; C = Pollutant Concentration ($PM_{2.5}$); $C_{low}$ = Concentration Breakpoint ≤C; $C_{high}$ = Concentration Breakpoint ≥C; $I_{low}$ = Index Break point corresponding to $C_{low}$; $I_{high}$ = Index Breakpoint corresponding to $C_{high}$; *Multiplication Sign

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