# AIR QUALITY MONITORING @ 40 FEET HEIGHT – Report Date: 24.9.2022

## (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:** 23-09-2022 to 24-09-2022 from 9:00 a.m. to 9:00 a.m. **Yesterday:** 22-09-2022 to 23-09-2022 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 | 50 | 97 | 21 | 49 | 87 | 4.3 | SSE | 31.4 | 25.2 | 104 | 8.5 | 66 | 76 | 30 | 31 | 81 | 2.3 | SE | 32.7 | 26.5 | 119 | 12.5 |
| 3 / 34 | 57 | 76 | 22 | 31 | 87 | 4.3 | SSE | 31.4 | 25.2 | 104 | 8.5 | | | | | | | | | | | |
| Science Faculty | 57 | 99 | 22 | 37 | 87 | 4.3 | SSE | 31.4 | 25.2 | 104 | 8.5 | | | | | | | | | | | |

**Views of AQI Research Group:** Increase in Wind Speed, decrease in Relative Humidity, increase in Solar Radiation and Temperature, change in Wind Direction, and intermittent Rainfall have been favourable factors which appear to have helped in improvement of Air Quality Index both at Dayalbagh and Sanjay Place.

Concentrations of both $PM_{2.5}$ and $PM_{10}$ are higher at Sanjay Place than at Dayalbagh.

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