AIR QUALITY MONITORING @ 40 FEET HEIGHT – Report Date: 20.12.2022
(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 $\mu g/m^3$ Sampling Duration = 24 hrs (9:00 AM to 9:00 AM)

Today: 19-12-2022 to 20-12-2022 from 9:00 a.m. to 9:00 a.m. **Yesterday:** 18-12-2022 to 19-12-2022 from 9:00 a.m. to 9:00 a.m.

DAYALBAGH (TIME WEIGHTED AVERAGE DATA)

LOCATION	AQI $PM_{2.5}$ Today	AQI $PM_{2.5}$ Yesterday	AQI PM_{10} Today	AQI PM_{10} Yesterday	RH %	WS m/s	WD	T °C Max	T °C Min	SR W/m²	RF mm
4 / 97	160 (13%↓)	166	83 (4%↓)	86	76	0.5	NW	25.3	8.7	105	0
3 / 34	155 (11%↓)	160	64 (1%↓)	65	76	0.5	NW	25.3	8.7	105	0
Science Faculty	158 (9%↓)	166	61 (2%↓)	62	76	0.5	NW	25.3	8.7	105	0

SANJAY PLACE AND AVAS VIKAS (ARITHMETIC MEAN DATA)

LOCATION	AQI $PM_{2.5}$ Today	AQI $PM_{2.5}$ Yesterday	AQI PM_{10} Today	AQI PM_{10} Yesterday	RH %	WS m/s	WD	T °C Max	T °C Min	SR W/m²	RF mm
Sanjay Place	166 (26%↓)	182	106 (28%↓)	140	70	1.1	S	23.9	11.1	70	0
Avas Vikas	176 (7%↓)	180	106 (9%↓)	114	79	0.6	NE	24.5	10.0	58	0

Views of AQI Research Group: Concentrations of Particulate matter have decreased at all sites of Dayalbagh probably due to change in Wind Direction. The Air Quality Index w.r.t. $PM_{2.5}$ remains in the *Unhealthy for All* category while w.r.t. PM_{10} it remains in the *Moderate* category at all sites of Dayalbagh.
Average Visibility yesterday was 1.3 Kms, it dropped to 1.2 Kms today.
Concentrations of Particulate Matter have also decreased at Sanjay Place and Avas Vikas, Bodla. The Air Quality Index w.r.t $PM_{2.5}$ at both these sites remains in the *Unhealthy for All* category while w.r.t PM_{10} it remains in the *Unhealthy for Sensitive Groups* category.

Values in parentheses indicate the percentage change in the pollutant concentrations with respect to yesterday. ↑indicates increase while ↓ indicates decrease in pollutant concentrations. Percentage change has not been shown w.r.t. AQI values as the breakpoints for the different categories are not evenly distributed.

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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