AIR QUALITY MONITORING @ 40 FEET HEIGHT – Report Date: 29.11.2022
(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/m³ Sampling Duration = 24 hrs (9:00 AM to 9:00 AM)

Today: 28-11-2022 to 29-11-2022 from 9:00 a.m. to 9:00 a.m. Yesterday: 27-11-2022 to 28-11-2022 from 9:00 a.m. to 9:00 a.m.

LOCATION	DAYALBAGH (TIME WEIGHTED AVERAGE DATA)											LOCATION	SANJAY PLACE AND AVAS VIKAS (ARITHMETIC MEAN DATA)										
	AQI				Meteorological Parameters								AQI				Meteorological Parameters						
	PM2.5		PM10					T ˚C					PM2.5		PM10					T ˚C			
	Today	Yesterday	Today	Yesterday	RH %	WS m/s	WD	Max	Min	SR W/m²	RF mm		Today	Yesterday	Today	Yesterday	RH %	WS m/s	WD	Max	Min	SR W/m²	RF mm
4 / 97	151 (9%↑)	139	70 (10%↑)	66	67	0.4	WNW	28.9	11.1	117	0	Sanjay Place	176 (3%↑)	174	133 (4%↑)	129	59	0.6	N	28.0	14.8	120	0
3 / 34	134 (6%↑)	127	58 (9%↑)	55	67	0.4	WNW	28.9	11.1	117	0	Avas Vikas	NA	180	113 (7%↑)	107	68	0.4	ENE	29.1	12.9	67	0
Science Faculty	152 (10%↑)	149	61 (10%↑)	57	67	0.4	WNW	28.9	11.1	117	0												

Views of AQI Research Group: Particulate matter concentrations have increased at all sites of Dayalbagh probably due to stagnant atmospheric conditions associated with moderate Relative Humidity and low wind speed resulting in less dispersion. The Air Quality Index w.r.t. $PM_{2.5}$ remains in the *Unhealthy for Sensitive Groups* category at Prem Nagar but has changed to the *Unhealthy for All* category at Vidyut Nagar and Science Faculty while w.r.t. PM_{10} it is in the *Moderate* category at all sites of Dayalbagh. $PM_{2.5}$ values are not available for Avas Vikas, Bodla. At Sanjay Place, the Air Quality Index w.r.t $PM_{2.5}$ remains in the *Unhealthy for All* category while w.r.t. PM_{10} the Air Quality Index remains in the *Unhealthy for Sensitive Groups* category at both the sites.

Values in parentheses indicate the percentage change in the pollutant concentrations with respect to yesterday. ↑ indicates increase 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.

COLOR CODE:-

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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