

WRAP Exams · wrapexams.com

Prelims PYQ, Mains model answers, and copy evaluation. Write to the desk for this paper, a doubt, or the AI waitlist.

ask@wrapexams.com · +91 85951 84903 · wrapexams.com

Q44

In the context of WHO Air Quality Guidelines, consider the following statements: 1. The 24-hour mean of PM 2.5 should not exceed 15 $\mu\text{g}/\text{m}^3$ and annual mean of PM2.5 should not exceed 5 $\mu\text{g}/\text{m}^3$. 2. In a year, the highest levels of ozone pollution occur during the periods of inclement weather. 3. PM10 can penetrate the lung barrier and enter the bloodstream. 4. Excessive ozone in the air can trigger asthma. Which of the statements given above are correct? (a) 1, 3 and 4 (b) 1 and 4 only (c) 2, 3 and 4 (d) 1 and 2 only Official key: B.

UPSC Civil Services Prelims 2022 · General Studies · 2 marks · Environment and Ecology

Environment, ecology, climate, biodiversity - Prelims GS Paper I.

Explanation

(a)

1, 3 and 4. PM10 is coarser; PM2.5 is the fraction that more readily enters blood. Ozone peaks in sunshine, not 'inclement weather'.

(b) Official key

1 and 4 only. WHO 2021: PM2.5 15 $\mu\text{g}/\text{m}^3$ (24 h) and 5 $\mu\text{g}/\text{m}^3$ (annual). Ozone aggravates asthma. 2 and 3 fail.

(c)

2, 3 and 4. 2 and 3 are the misses.

(d)

1 and 2 only. Statement 2 is false.

Summary

Official key is (b) 1 and 4 only. The 2021 WHO AQG numbers for PM2.5 are 15 (24-hour) and 5 (annual) $\mu\text{g}/\text{m}^3$. Ozone is a photochemical summer pollutant and an asthma trigger. Inclement weather is not ozone's peak; PM10 is not the particle that typically crosses into blood the way ultrafines/PM2.5 are discussed.

Related possible facts

These can be asked in a future Prelims paper.

WHO AQG 2021

Tightened PM2.5 annual guideline to 5 $\mu\text{g}/\text{m}^3$.

Ground-level ozone

NO_x + VOCs in sunlight; not stratospheric ozone.

WRAP Exams · Write. Read. Analyse. Practice. · <https://wrapexams.com/upsc/prelims/gs/2022/in-the-context-of-who-air-quality-guidelines-consider-the-following-statements-1-the-24-hour-mean-of-pm-2-5-should-not-exceed-15-g-m3-and-annual-mean-of-pm2-5-should-not-exceed-5-g-m3-2-in-a-year-the-highest-levels-of/> · ask@wrapexams.com · wrapexams.com

WRAP Exams