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Q100

**Consider the following: 1. Carbon monoxide 2. Nitrogen oxide 3. Ozone 4. Sulphur dioxide Excess of which of the above in the environment is/are cause(s) of acid rain? (a) 1, 2 and 3 (b) 2 and 4 only (c) 4 only (d) 1, 3 and 4 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, 2 and 3. CO and ozone are not the classic acid-rain pair.

**(b) Official key**

2 and 4 only. Nitrogen oxides and sulphur dioxide → nitric and sulphuric acids in rain. Not CO, not ozone as the acid-rain cause.

**(c)**

4 only. NO<sub>x</sub> is also a driver.

**(d)**

1, 3 and 4. Carbon monoxide is not an acid-rain precursor here.

**Summary**

Official key is (b) 2 and 4 only. **Acid rain** is chiefly from SO<sub>2</sub> and NO<sub>x</sub>. Carbon monoxide and ozone are air pollutants with other harms, not the acid-rain couple in this list.

**Related possible facts**

These can be asked in a future Prelims paper.

**Acid rain**

pH of precipitation lowered by H<sub>2</sub>SO<sub>4</sub> and HNO<sub>3</sub>.

**Wet / dry deposition**

Rain vs gaseous/particle acid fallout.

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