Worksheet: Water in the Atmosphere (Humidity, Clouds, Precipitation)

ISC · Class 11 · Geography · 3 questions · 12 marks

Name: _____ Date: _____ Score: _____ / 12

Q1. At 25°C, air can hold a maximum of 20 g of water vapour per cubic metre. An air sample at 25°C actually contains 14 g/m³ of water vapour. (a) What is the absolute humidity? (b) What is the relative humidity? (c) If this air is cooled to the temperature where maximum capacity is 14 g/m³, what happens? *[3 marks]*

Q2. Explain why Mumbai receives ~220 cm of annual rainfall while Pune, only 150 km east, receives only ~72 cm. Include: (a) the mechanism of orographic rainfall, (b) why rain is heavy on the windward side, and (c) why the leeward side is drier. *[4 marks]*

Q3. Explain the hydrological (water) cycle. Why is it called a 'cycle'? What would happen if any one stage of the cycle were disrupted — for example, if global evaporation dropped by 30% due to ocean cooling? *[5 marks]*