15 The density of air on the Earth decreases almost linearly with height from $1.22\,\mathrm{kg\,m^{-3}}$ at sea level to $0.74\,\mathrm{kg\,m^{-3}}$ at an altitude of 5000 m.

Atmospheric pressure at the Earth's surface on a particular day is 100 000 Pa. The value of g between the Earth's surface and an altitude of 5000 m can be considered to have a constant value of $9.7\,\mathrm{m\,s^{-2}}$.

What will be the atmospheric pressure at an altitude of 5000 m?

A 36 000 Pa **B** 48 000 Pa **C** 52 000 Pa **D** 59 000 Pa

16 A parachutist is falling at constant (terminal) velocity