

- 14** A sample of air contains N molecules. The mean random kinetic energy per molecule is E_k . The mean intermolecular potential energy per molecule is E_p .

What is the internal energy of the sample?

A $\frac{N}{(E_k + E_p)}$

B $\frac{N}{(E_k - E_p)}$

C $N(E_k + E_p)$

D $N(E_k - E_p)$

- 15** A sample of gas is compressed slowly in a metal cylinder. W is the amount of work done on the