

**26** An alternating potential difference is connected across a fixed resistor and the frequency  $f$  of the supply is varied, keeping the r.m.s voltage constant. The mean rate of production of heat in the resistor is

**A** proportional to  $f$

**B** proportional to  $f^{1/2}$

**C** inversely proportional to  $f$

**D** independent of  $f$

**27** A 10 MW nuclear power station produces electrical power at 600 V. It uses an ideal step up