

**24** An electron P, having a speed  $v$ , travels at right-angles to a uniform magnetic field. P then travels in a circular orbit of period  $T$  and orbital radius  $r$ .

Another electron Q travels at right-angles to the same magnetic field. Q travels in a circular orbit of radius  $2r$ . What are the period and speed of Q?

	period	speed
<b>A</b>	$2T$	$v$
<b>B</b>	$0.5T$	$v$
<b>C</b>	$T$	$2v$
<b>D</b>	$T$	$0.5v$