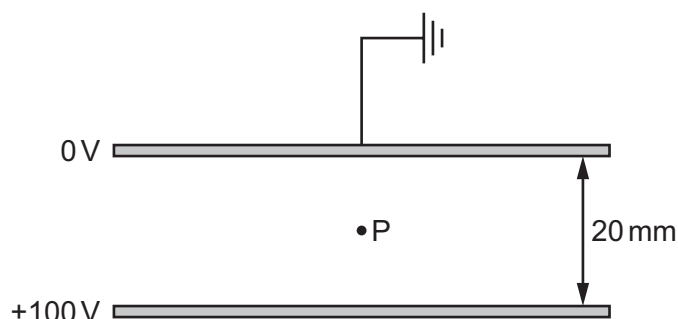


- 28** Water waves of wavelength  $\lambda$  are diffracted as they pass through a gap of width  $d$  in a barrier.

Which combination of wavelength and gap width would produce the greatest angle of diffraction?

	gap width	wavelength
<b>A</b>	$\frac{1}{2}d$	$2\lambda$
<b>B</b>	$\frac{1}{2}d$	$\frac{1}{2}\lambda$
<b>C</b>	$2d$	$2\lambda$
<b>D</b>	$2d$	$\frac{1}{2}\lambda$

- 29** Two horizontal parallel plate conductors are separated by a distance of 20 mm in air. The upper plate is earthed and the potential of the lower plate is +100 V.



What is the electric field strength at point P midway between the plates?

- A**  $5000 \text{ V m}^{-1}$  downwards
- B**  $5000 \text{ V m}^{-1}$  upwards
- C**  $10\,000 \text{ V m}^{-1}$  downwards
- D**  $10\,000 \text{ V m}^{-1}$  upwards