

Solutions

Each answer shows the steps, then the **result**.

2.1

- $\Phi_E = EA = 500 \times 0.20 = 100 \text{ N m}^2 \text{ C}^{-1}$

2.2

- when the field is parallel to the surface (perpendicular to its normal)

2.3

- the net charge enclosed by the surface

3.1 B

3.2 B

3.3

(a)

- $\Phi_E = EA = 300 \times 0.40 = 120 \text{ N m}^2 \text{ C}^{-1}$

(b)

- $\Phi_E = EA \cos 60^\circ = 120 \times 0.5 = 60 \text{ N m}^2 \text{ C}^{-1}$