

Mark schemes

Q1.

B

the charge stored on a capacitor consisting of two parallel plates of area 1 m^2 separated by 1 m when the potential difference between the plates is 1 V

[1]

Q2.

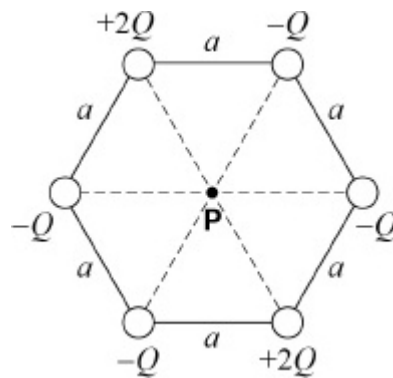
A

 $16F$

[1]

Q3.

D



[1]

Q4.

B

 $1.38 \times 10^{-7} \text{ V m}^{-1}$ downwards

[1]

Q5.

A

an electron and a positive pion

[1]

Q6.

C

 10^{36}

[1]

Q7.

C

$$\frac{2Q}{\pi\epsilon_0 d^2}$$

[1]

Q8.

A

$$20 \mu N$$

[1]

Q9.

A

vertically down the plane.

[1]

Q10.

C

the electric potential of the sphere.

[1]

Q11.

C

$$4.0 \times 10^{-14} m$$

[1]

Q12.

B

[1]

Q13.

A

[1]