

Answer **all** the questions in the spaces provided.

- 1 (a) Define *force*.

..... [1]

- (b) State the SI base units of force.

..... [1]

- (c) The force F between two point charges is given by

$$F = \frac{Q_1 Q_2}{4\pi r^2 \epsilon}$$

where Q_1 and Q_2 are the charges,

r is the distance between the charges,

ϵ is a constant that depends on the medium between the charges.

Use the above expression to determine the base units of ϵ .

base units [2]

[Total: 4]