

Worksheet: Electric Charges and Fields

IB · Class 12 · Physics · 5 questions · 13 marks

Name: _____

Date: _____

Score: _____ / 13

Q1. Find the flux through a cube of side 0.1 m with 10 μC at its centre. *[2 marks]*

Q2. Charges 2 μC and -2 μC are 1 cm apart. Find the field at 50 cm on the perpendicular bisector. *[3 marks]*

Q3. An infinite line charge has linear density 5 $\mu\text{C}/\text{m}$. Find the field at 10 cm. *[2 marks]*

Q4. A conducting sphere of radius 0.1 m carries 5 μC . Find E at $r = 0.05$ m and $r = 0.3$ m. *[3 marks]*

Q5. A dipole ($p = 1 \times 10^{-7} \text{ C m}$) is at 30 degrees to a field of $2 \times 10^4 \text{ N/C}$. Find torque and potential energy. *[3 marks]*
