

PYQSide

JEE MAIN ELECTRIC CHARGES AND FIELDS — ELECTRIC DIPOLE: FIELD ON AXIS AND EQUATOR — PYQS

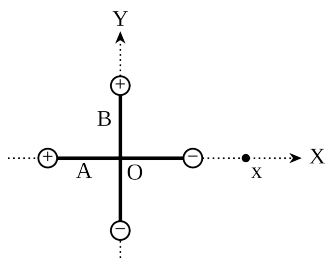
Max. Marks: 12

Questions: 3

Section A (MCQ)

- Q.1** Two short electric dipoles **A** and **B** having dipole moment p_1 and p_2 respectively are placed with their axes mutually perpendicular as shown in the figure. The resultant electric field at a point x is making an angle of 60° with the line joining points O and x . The ratio of the dipole moments p_2/p_1 is _____.

[JEE Main 2026 (Online) 2nd April Morning Shift]



- (1) $\frac{\sqrt{3}}{2}$ (2) $2\sqrt{3}$ (3) $\frac{1}{\sqrt{3}}$ (4) $\sqrt{3}$

Scan or tap for the full solution



- Q.2** Three charges $+2q$, $+3q$ and $-4q$ are situated at $(0, -3a)$, $(2a, 0)$ and $(-2a, 0)$ respectively in the xy plane. The resultant dipole moment about origin is _____.

[JEE Main 2026 (Online) 24th January Morning Shift]

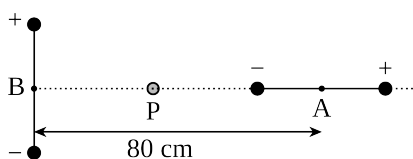
- (1) $2qa(7\hat{i} - 3\hat{j})$ (2) $2qa(3\hat{j} - 7\hat{i})$
 (3) $2qa(3\hat{i} - 7\hat{j})$ (4) $2qa(3\hat{j} - \hat{i})$

Scan or tap for the full solution



- Q.3** Two short dipoles (A, B), A having charges $\pm 2 \mu\text{C}$ and length 1 cm and B having charges $\pm 4 \mu\text{C}$ and length 1 cm are placed with their centres 80 cm apart as shown in the figure. The electric field at a point P, equi-distant from the centres of both dipoles is _____ N/C.

[JEE Main 2026 (Online) 23rd January Evening Shift]



- (1) $\frac{9}{16}\sqrt{2} \times 10^5$ (2) $\frac{9}{16}\sqrt{2} \times 10^4$
 (3) $9\sqrt{2} \times 10^4$ (4) $4.5\sqrt{2} \times 10^4$

Scan or tap for the full solution



ANSWER KEY

Ques.	1	2	3								
Ans.	2	1	2								