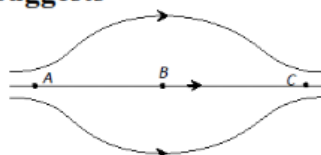


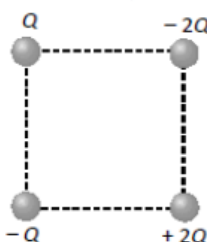
MY EGURU PVT. LTD.
Electrostatics
DPP 8

- Q.1** The intensity of the electric field required to keep a water drop of radius 10^{-5} cm just suspended in air when charged with one electron is approximately
- (1) 260 volt/cm
 - (2) 260 Newton/coulomb
 - (3) 130 volt/cm
 - (4) 130 Newton/coulomb
- ($g = 10$ Newton/ kg, $e = 1.6 \times 10^{-19}$ coulomb)

- Q.2** The figure shows some of the electric field lines corresponding to an electric field. The figure suggests

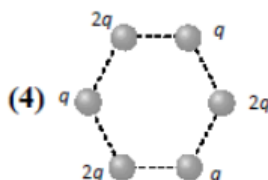
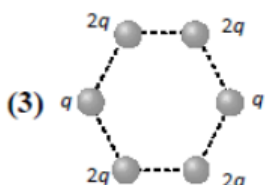
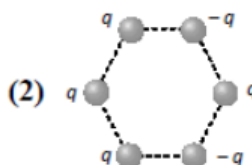
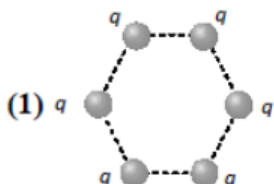


- (1) $E_A > E_B > E_C$
 - (2) $E_A = E_B = E_C$
 - (3) $E_A = E_C > E_B$
 - (4) $E_A = E_C < E_B$
- Q.3** Four charges are placed on corners of a square as shown in figure having side of 5 cm. If Q is one microcoulomb, then electric field intensity at centre will be



- (1) 1.02×10^7 N/C upwards
- (2) 2.04×10^7 N/C downwards
- (3) 2.04×10^7 N/C upwards
- (4) 1.02×10^7 N/C downwards

Q.4 Figures below show regular hexagons, with charges at the vertices. In which of the following cases the electric field at the centre is not zero



Q.5 A cylinder of radius R and length L is placed in a uniform electric field E parallel to the cylinder axis. The total flux for the surface of the cylinder is given by

(1) $2\pi R^2 E$

(2) $\pi R^2 / E$

(3) $(\pi R^2 - \pi R) / E$

(4) Zero

ANSWER KEY

1. (2)
2. (3)
3. (1)
4. (2)
5. (4)