

Student Name :

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Engineering Physics II 2171220

Homework No. 1

Consider Figure (1) below :

{ Coulomb's Constant $k = 9 \times 10^9 \text{ N.m}^2/\text{C}^2$ }

- (a) Calculate the magnitude and direction of the electric field E_1 at point A due to point charge q_1 .
- (b) Calculate the magnitude and direction of the electric field E_2 at point A due to point charge q_2 .
- (c) Calculate the magnitude and direction of the resultant electric field E at point A due to q_1 and q_2 .
- (d) Calculate the magnitude and direction of the electric force exerted on a point charge $q_0 = 2 \text{ nC}$ placed at point A,

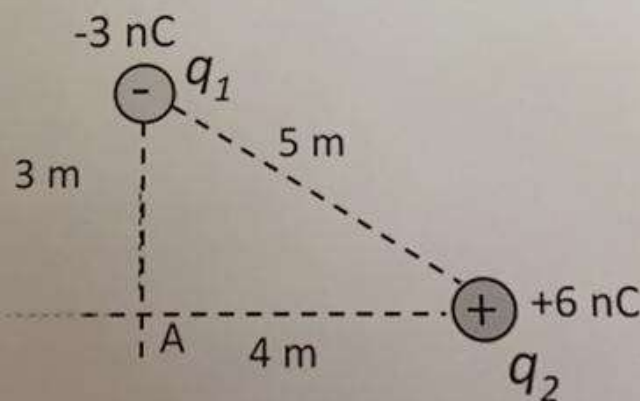


Figure (1)

SOLUTION