

Q4: 1) what is the difference between Rectangular, cylindrical and spherical co-ordinate system? why we do such analysis?

- | | [A] | [B] | [C] |
|------------|------------|-------------------|---------------------------|
| 2). Define | a) Point | a) Point charge | a) Point charge density |
| | b) Line | b) Line charge | b) Line charge density |
| | c) Surface | c) Surface charge | c) Surface charge density |
| | d) Volume | d) Volume charge | d) Volume charge density |

3) what is electric field, electric flux, electric flux density and also explain their relation with gauss's law. [with their units]

4) How do you define electric dipole? Can a dipole be considered as a line charge, if not then how you implement the

electric dipole analysis? [SAME ANALYSIS IS IMPLEMENTED IN LINE, SURFACE, VOLUME]

5) what is the change in angle in cylindrical and spherical co-ordinate system, like changes in ^{in length} we define in cart/rect. system

$$\text{as } \begin{matrix} x-dx & -dx & -\frac{\partial}{\partial x} & -\frac{\partial D}{\partial x} \\ y-dy & -dy & -\frac{\partial}{\partial y} & -\frac{\partial D}{\partial y} \\ z-dz & -dz & -\frac{\partial}{\partial z} & -\frac{\partial D}{\partial z} \end{matrix}$$

6) what is the definition of gradient, divergence and curl of the system.

7) we define a) open loop integration
b) close loop integration

8) Analyze the word Intensity and Density.

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