

[Assignment NO. 2 for ECE 6th & 7th sem students] Ans  
22/03/20

Ques 1:- Write the difference between line integral, surface integral and volume integral with def<sup>n</sup>.

2) Explain coulomb's law statement in vector form.

3) what is permittivity & its unit.

5) explain principle of superposition.

6) Find  $D$  (ie. electric flux density) in cartesian co-ordinate at point  $(7, 8, 6)$  due to

a) a point charge of  $20 \mu\text{C}$  at the origin

b) a uniform line charge of  $\rho_L = 20 \mu\text{C/m}$  on the  $z$ -axis.

c) a uniform surface charge density  $\rho_S = 57.2 \mu\text{C/m}^2$  on the plane  $x = 12 \text{ m}$ .

7) Explain gauss's law [mathematical representation]. How do you apply gauss law on infinite sheet of charge & differential volume element.

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[Please submit the assignment in A-4 sheet not in lining copy]

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Ans