QUES 05:-

a. Explain the meaning of the statement, electric charge of a body is quantized.
b. Why can one ignore quantization of electric charge when dealing with macroscopic i.e. large scale charges?

Sol.

a. Electric charge of a body is quantized. This means that only integral (1, 2… n) number of electrons can be transferred from one body to the other. Charges are not transferred in fraction. Hence, a body possesses total charge only in integral multiples of electric charge.
b. In macroscopic or large scale charges, the charges used are huge as compared to the magnitude of electric charge. Hence, quantization of electric charge is of no use on macroscopic scale. Therefore, it is ignored and it is considered that electric charge is continuous.