

Distinguish, differentiate, compare and explain what is the difference between Electric Charge and Mass. Comparison and Differences.

Differences between Electric Charge and Mass

S.No.	Electric Charge	Mass
1	Electric Charge may be positive, negative or zero.	Mass of a body is always positive.
2	Electric charge is always quantized i.e. $q = n e$	Quantization of mass is not yet established.
3	Charge on a body does not depend on speed.	Mass of a body increases with speed.
4	Charge is strictly conserved.	Mass is not conserved by itself as some of the mass may get change into energy or vice versa.
5	Electrostatic forces between the two charges may be attractive or repulsive.	Gravitational forces between two masses are always attractive.
6	Electrostatic forces between different charges may cancel out.	Gravitational forces between different bodies never cancel out.
7	A charged body always possesses some mass.	A body possessing mass may not have any net charge.