An experimental investigation was carried out to study the performance of a compression ignition (CI) engine fuelled with diesel with nanoparticles as an additive. The engine test results showed that addition of nanoparticles i.e. cerium oxide and zinc oxide leads to an improvement in thermal efficiency compare to diesel operation at full load. The smoke is decreased with the addition nano additives and also 40ppm of CeO2 as given the lowest rate of smoke.