Homework 3

1. (15 points) Obtain the propagator of photon in the Lorentz gauge, adding the approproate gauge fixing term to the QED langrangian and by obtaining equation of motion for the electromagnetic field.

2. (15 points) The same as above but for class of axial gauges.

3. (20 points) Using Feynman rules calculate the differential cross section of elastic electron – muon scattering.