

Self-energies :

$$(i) \quad \Sigma = \Sigma_{qg} + \Sigma_{q\chi}$$

$$\Sigma_{qg} = \text{Diagram: A fermion line with a gluon loop. The vertex is labeled } \Gamma_{qg}.$$

$$\Sigma_{q\chi} = \text{Diagram: A fermion line with a scalar loop. The vertex is labeled } \Gamma_{q\chi}.$$

$$(ii) \quad \Pi = \Pi_{gq} + \Pi_{gg} + \Pi_{g\chi}$$

$$\Pi_{gq} = \text{Diagram: A gluon line with a fermion loop. The vertex is labeled } \Gamma_{gq}.$$

$$\Pi_{gg} = \text{Diagram: A gluon line with a gluon loop. The vertex is labeled } \Gamma_{gg}.$$

$$\Pi_{g\chi} = \text{Diagram: A gluon line with a scalar loop. The vertex is labeled } \Gamma_{g\chi}.$$

$$(iii) \quad \Xi = \Xi_{\chi\chi} + \Xi_{\chi U} + \Xi_{\chi q} + \Xi_{\chi g}$$

$$\Xi_{\chi\chi} = \text{Diagram: A scalar line with a fermion loop. The vertex is labeled } \Gamma_{\chi\chi}.$$

$$\Xi_{\chi U} = \text{Diagram: A scalar line with a fermion loop and a scalar loop. The vertex is labeled } \Gamma_{\chi U}.$$

$$\Xi_{\chi q} = \text{Diagram: A scalar line with a fermion loop. The vertex is labeled } \Gamma_{\chi q}.$$

$$\Xi_{\chi g} = \text{Diagram: A scalar line with a gluon loop. The vertex is labeled } \Gamma_{\chi g}.$$

$$(iv) \quad \tilde{\Xi} = \Xi_{U\chi} = \Xi_{\chi U}$$