$$\frac{\delta}{\delta\xi(t)}\int dt' V(\xi(t'))$$

$$= \int dt' \frac{\delta V(\xi(t'))}{\delta\xi(t)} + \int dt' V(\xi(t')) \frac{\delta}{\delta\xi(t)}$$

$$\frac{\delta V(\xi(t'))}{\delta\xi(t)}$$

$$= \lim_{\varepsilon \to 0} \frac{V(\xi(t') + \varepsilon\delta(t'-t)) - V(\xi(t'))}{\varepsilon}$$

$$= \frac{dV(\xi(t'))}{d\xi(t')}\delta(t'-t)$$

$$= \frac{dV(\xi(t))}{d\xi(t)} + \int dt' V(\xi(t')) \frac{\delta}{\delta\xi(t)}$$

$$= \frac{\alpha}{i\hbar}\int D\xi\, \overline{\Phi[\xi]} \frac{dV(\xi(t))}{d\xi(t)} \Phi[\xi]$$

$$\therefore \frac{d^2}{dt^2}\int D\chi\, \overline{\Phi[\chi]}\chi(t)\Phi[\chi]$$

$$= \frac{-i\hbar}{m\alpha} \cdot \frac{\alpha}{i\hbar}\int D\xi\, \overline{\Phi[\xi]} \frac{dV(\xi(t))}{d\xi(t)} \Phi[\xi]$$