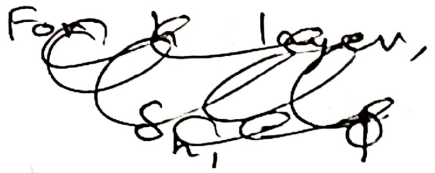
Ans to the Q: 4)

For h layer,



For f - layer,

$$\delta_{f_1} = e_{f_1} \phi'(v_{f_1})$$

$$\delta_{f_2} = e_{f_2} \phi'(v_{f_2})$$

$$\delta_{f_3} = e_{f_3} \phi'(v_{f_3})$$

For h - layer,

$$\delta_{h_1} = \phi''(v_{h_1}) \sum_{f \in C} \delta_f \omega_{f h_1}$$

$$\delta_{h_2} = \phi''(v_{h_2}) \sum_{f \in C} \delta_f \omega_{f h_2}$$

$$\delta_{h_3} = \phi''(v_{h_3}) \sum_{f \in C} \delta_f \omega_{f h_3}$$

$$\delta_{h_4} = \phi''(v_{h_4}) \sum_{f \in C} \delta_f \omega_{f h_4}$$

For p - layer,

$$\delta_{P_1} = \phi'''(v_{P_1}) \sum_{h \in C} \delta_h \omega_{hP_1}$$

$$\delta_{P_2} = \phi'''(v_{P_2}) \sum_{h \in C} \delta_h \omega_{hP_2}$$

$$\delta_{P_3} = \phi'''(v_{P_3}) \sum_{h \in C} \delta_h \omega_{hP_3}$$

$$\delta_{P_4} = \phi'''(v_{P_4}) \sum_{h \in C} \delta_h \omega_{hP_4}$$

$$\delta_{P_5} = \phi'''(v_{P_5}) \sum_{h \in C} \delta_h \omega_{hP_5}$$

For m - layer,

$$\delta_{m_1} = \phi''''(v_{m_1}) \sum_{p \in C} \delta_p \omega_{pm_1}$$

$$\delta_{m_2} = \phi''''(v_{m_2}) \sum_{p \in C} \delta_p \omega_{pm_2}$$

$$\delta_{m_3} = \phi''''(v_{m_3}) \sum_{p \in C} \delta_p \omega_{pm_3}$$

$$\delta_{m_4} = \phi''''(v_{m_4}) \sum_{p \in C} \delta_p \omega_{pm_4}$$

$$\delta_{m_5} = \phi''''(v_{m_5}) \sum_{p \in C} \delta_p \omega_{pm_5}$$

$$\delta_{m_6} = \phi''''(v_{m_6}) \sum_{p \in C} \delta_p \omega_{pm_6}$$