

二、(10')

$$\begin{array}{llll} a_1:(v_1, v_2)_5 & a_2:(v_1, v_3)_6 & a_3:(v_2, v_5)_3 & a_4:(v_3, v_4)_3 \\ a_5:(v_3, v_5)_6 & a_6:(v_4, v_5)_3 & a_7:(v_4, v_7)_1 & a_8:(v_4, v_8)_4 \\ a_9:(v_5, v_6)_4 & a_{10}:(v_5, v_7)_2 & a_{11}:(v_6, v_{10})_4 & a_{12}:(v_7, v_9)_5 \\ a_{13}:(v_8, v_9)_2 & a_{14}:(v_9, v_{10})_2 & & \end{array}$$

注：顶点偶对右下角的数字表示边上的权值。

请按下述过程指出所有关键路径:

[illegible]