Table 1: Answer for Question #3(a). The shortest-path estimates are shown within the vertices; empty vertices have estimates equal to infinity (∞). Bold edges indicate predecessor values. Bold vertices are in the set $S$ and regular vertices are in the priority queue $Q = V - S$. (a) The situation before the first execution of the while loop on lines 4–8. (b)–(f) The situation after each successive iteration of the while loop. Note that edges for which relaxation is attempted in each successive iteration of the while loop are marked with circles.
Table 2: Answer for Question #3(b). The shortest-path estimates are shown within the vertices; empty vertices have estimates equal to infinity (\(\infty\)). Bold edges indicate predecessor values. (a) The situation just before the first pass over the edges. (b)–(e) The situation after each successive pass over the edges.