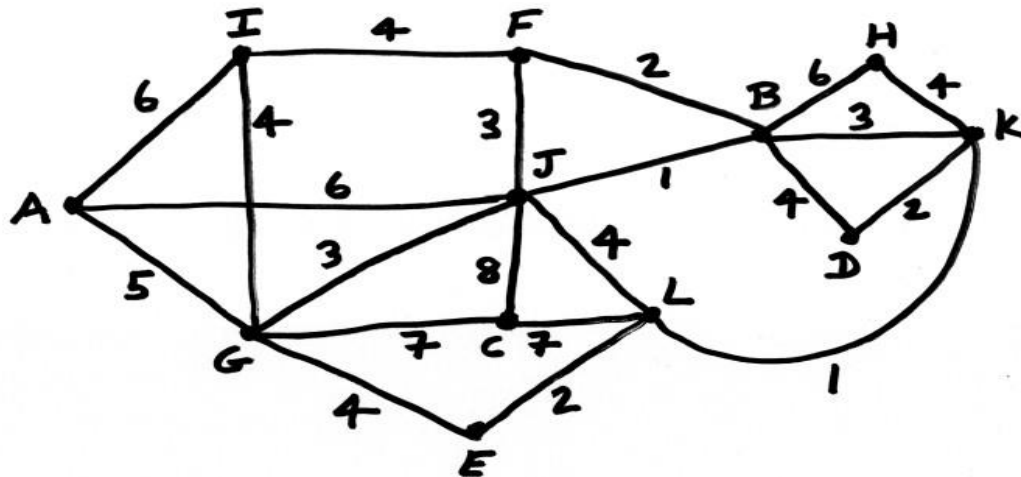


INT202 Complexity of Algorithms

1. Consider the weighted (undirected) graph below. (Edges $\{G, I\}$ and $\{A, J\}$ cross but there is not a vertex at their intersection.)



- (a) Applying Dijkstra's algorithm to find shortest paths from vertex A to all other vertices in the graph. You should list the shortest distance array and draw the subgraph that contains only those edges used in the shortest paths.
- (b) Applying Kruskal's algorithm to find a minimum spanning tree for the same weighted graph. Draw the subgraph consisting of the edges that comprise your minimum spanning tree, and indicate the smallest total weight.