*Social*Networks*
Home Work #1
B. Mishra
Due: 25 October 2016

Q1. [10] Exercise #1 ([EK], pp 349)

1. Consider the set of 18 Web pages drawn in Figure 13.8, with
links forming a directed graph. Which nodes constitute the largest
strongly connected component (SCC) in this graph? Taking this as
the giant SCC, which nodes then belong to the sets IN and OUT
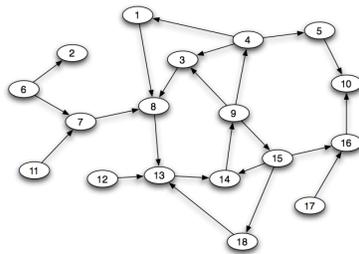defined in Section 13.4? Which nodes belong to the tendrils of the
graph?

Figure 13.8: A directed graph of Web pages.

Q2. [10] Exercise #5 ([EK], pp 382)

5. Figure 14.21 depicts the links among 6 Web pages, and also a
proposed PageRank value for each one, expressed as a decimal
next to the node. Are these correct equilibrium values for the Basic
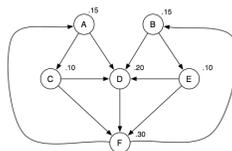PageRank Update Rule? Give a brief (1-3 sentence) explanation for
your answer.

Figure 14.21: A collection of 6 Web pages, with possible PageRank values.