

**CSC 641 Network Science, Fall 2019**  
**Assignment 2 (Take Home: Due: Oct. 15, 2019: 7.30 PM)**

**Total: 100 pts**

Hardcopy (Neatly written or typed), due in Class

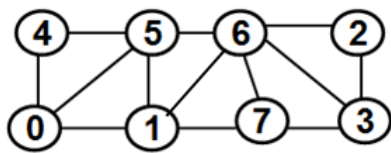
For the graph given below (show all the work in detail):

(1 - 15 pts) Determine the spectral radius ratio for node degree.

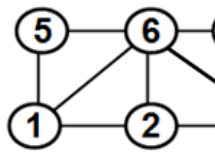
(2 - 25 pts) Determine the algebraic connectivity of the graph.

(3 - 30 pts) Determine the Estrada index for protein folding for the graph assigned to you as well as determine the folding effectiveness.

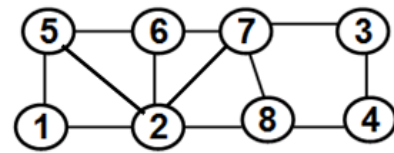
(4 - 30 pts) Determine the bipartivity index of the graph, the two partitions and identify the frustrated edges, if any.



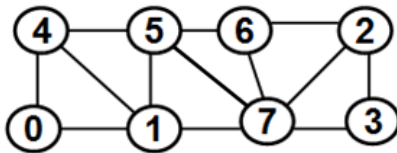
Champion, Jeremy



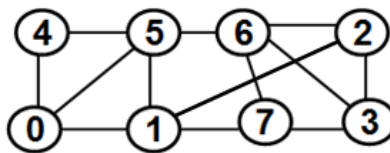
Deanes, Marcus



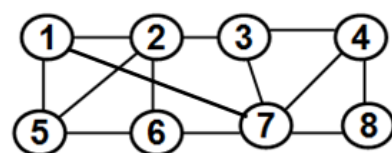
Evans, Rashad



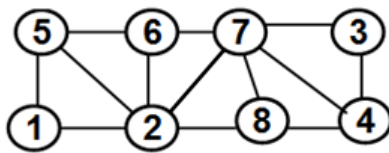
Gammons, Allee



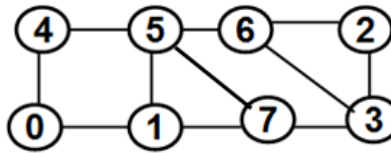
Gebre, Amanuel



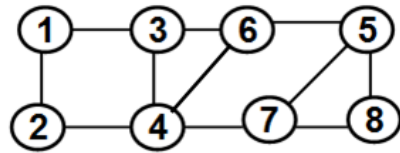
Jones, Quincy



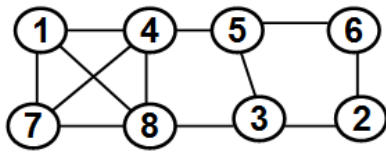
Lewis, Devario



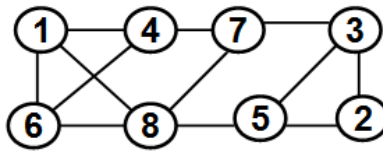
Maduka, Chidiebere



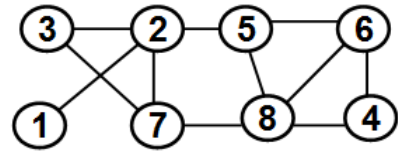
Ukpebor, Augustine



Valliappan, Vallimanalan



Xu, Ran



Zhang, Xuecen