Feedback — HW 3 part 2

You submitted this homework on **Sat 17 Nov 2012 12:20 AM PST**. You got a score of **8.00** out of **8.00**.

Question 1

According to the empirical findings in the Baker/Faulkner article (see syllabus), a network with high information processing needs (e.g. the turbine network), will be (check all that apply):

Your Answer		Score	Explanation
☐ decentralized	✓	0.25	a centralized network is needed if there is complex coordination that needs to occur
☑ centralized	✓	0.25	a centralized network is needed if there is complex coordination that needs to occur
☑ dense	✓	0.25	due to the need for much coordination, many edges need to be present, making the network dense
☐ sparse	✓	0.25	due to the need for much coordination, many edges need to be present, making the network dense
Total		1.00 / 1.00	

Question Explanation

See the results section of Baker/Faulkner

Question 2

Referring to Baker/Faulkner, the centrality measure(s) predictive of whether a person participating in the conspiracy network would be convicted is(are):

Your Answer		Score	Explanation
☑ degree	✓	0.33	
☐ betweenness	✓	0.33	
☐ closeness	✓	0.33	
Total		1.00 / 1.00	

Question Explanation

Only one of these centrality measures was found to be a significant predictor of conviction.

Question 3

Which of the following is an explanation of why some centrality measures were predictive of why a node is convicted while others were not.

Your Answer	Score	Explanation
◉ hearsay rule	✓ 1.00	because hearsay is inadmissible, only direct observations (reflected in degree) can be used to convict someone
Total	1.00 / 1.00	

Question Explanation

Check the "Results" section of the paper, which discusses which centrality measures corresponded with whether an individual was convicted.

Question 4

Which of the following are true based on the Aral/Van Alstyne study of worker productivity in a recruiting firm?

Your Answer		Score	Explanation
☑ Larger network size is positively correlated with network diversity.	✓	0.50	yes, according to the paper
☐ Network diversity contributes even more to the total amount of novel information a person receives, than network size does	✓	0.50	false, the primary predictor of how much novel information a person receives is the size of their network
☑ The amount of novel information an individual receives is positively correlated with job performance.	✓	0.50	yes, in this recruiting firm, it was
☐ Network diversity does not predict better job performance once the amount of novel information an individual receives is factored in.	✓	0.50	the preliminary findings are that network diversity *does* correlate with better job performance
Total		2.00 / 2.00	

Question Explanation

Check the paper.

Question 5

Go to the Movie Galaxies representation of the movie Fargo. You can mouse over the nodes to identify them and to find their degree and betweenness. A node with relatively high degree but modest betweenness is:

Your Answer	Score	Explanation
◉ Carl	✓ 1.00	Carl has relatively high degree, but most of the people he talks to have other ways of interacting with the rest of the network.
Total	1.00 / 1.00	

Question Explanation

If an individual's network neighbors are talking to each other, this gives the individual low betweenness because it is easy to go around them.

Question 6

Download the world trade data for fish and fish products as a GDF file. Load it into Gephi. Apply a filter (Filters->Edges->Edge weight ... drag to Queries, click on Filter) such that only edges are kept where at least 5% (weight = 0.05) of the country's imports of fish stem from the other country. Don't worry if you can't get 0.05000, just aim for roughly that amount of threshold filtering. Calculate betweenness by clicking on Statistics -> Av. Path. Length -> Run. Check out the beetweenness values in the data laboratory view. Among these choices, which country has the highest betweenness?

Your Answer	Score	Explanation
◉ Bangladesh	✓ 2.00	
Total	2.00 / 2.00	

Question Explanation

One of these countries has high closeness and it is a large exporter of shrimp.