

**ECE8863: SENSOR NETWORKS
SPRING 2007**

EXAM 1: February 21, 2007

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$\Sigma 100$

THIS IS AN OPEN BOOK TEST!!
ALL QUESTIONS HAVE THE SAME WEIGHT.
PLEASE WRITE YOUR NAME AND CODEWORD ON EVERY SHEET!!!
ANSWER BRIEFLY AND RIGHT TO THE POINT!!

NAME: _____

CODEWORD: _____

Question 1.

One way to save power in WSNs is to address the IDLE listening problem by sleep schedules. What else can be done in terms of topology (architecture) control to save energy? What will be the problem with this solution?

Question 2.

What type of WSN applications are NOT well-suited for ESRT?

Question 3.

What does the DISTORTION FUNCTION $D(M)$ in the context of ESRT tell us?

Question 4.

Are there Routing Tables in SPIN? Why or Why not?

Question 5.

For what type of WSN applications is Directed Diffusion Algorithm not efficient?

Question 6.

What are the main differences between SPIN and Directed Diffusion?

Question 7.

What is the Negative Reinforcement?

Question 8.

Why are geographical locations not used for Cluster Forming in LEACH?

Question 9.

How is the latency problem partly addressed in SMAC?

Question 10.

What are the advantages of the CCA algorithm in BMAC?