# HOS 4341/6932
# Assignment 1
# 20 Points

This assignment is based on lecture 1 through 12. Please provide short answers to these questions.

1. Is the quiescent center in the root apical meristem actually quiescent? Discuss. (2 points)

2. Discuss the arrangement of development programs in a monocot leaf. (2 points)

3. Propose a method to determine the developmental stage of a dormant bud across the species. (3 points)

4. Out of DNA, RNA and protein, which one is more important for analysis of gene expression in relation to a physiological condition? Choose one and provide supporting statements for it. (2 points)

5. Why short day plants are more aptly called long night plants? Describe an experiment to determine if light or dark condition is critical for flowering in a short day plant. (3 points)

6. What is Florigen? Pick a compound or a signal that you think is Florigen and provide supporting statements for your choice. (3 points)

7. A grower finds a variant of a plant species growing in his field that remains vegetative even after a period of vernalization. He asks you to explain to him the reason for that observation. What would be the physiological and genetic reasons that you will provide to him? Can you suggest a remedy? (5 points)