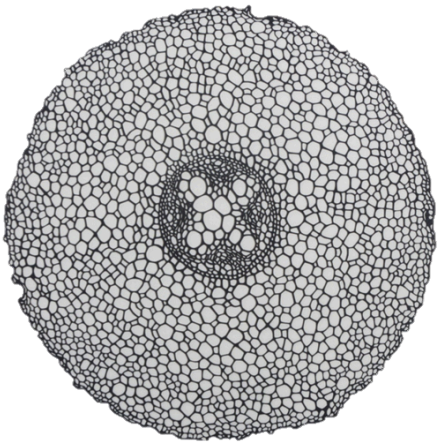
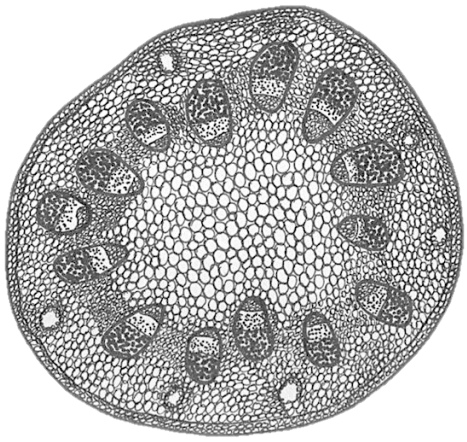
G11 Biology: Class 15 Homework

1. Contrast the location of the vascular bundles in herbaceous stems for monocots and eudicots **[2 marks]**

2. Compare and contrast the vascular tissue of gymnosperms and angiosperms. Consider the types of xylem and phloem cells. **[4 marks]**

3. Identify the following cross-sections as a monocot root or a eudicot root. How do you know? **[4 marks]**





4. What benefit do nitrogen fixing bacteria and mycorrhizal fungi provide to the plant? What is exchanged? **[4 marks]**

5. What is the main driving force for the movement of water in plants? **[2 marks]**

6. During an experiment, a student covers all the stomata of a plant with nail polish, sealing them shut.
   a) Predict how this would affect water transport. **[2 marks]**

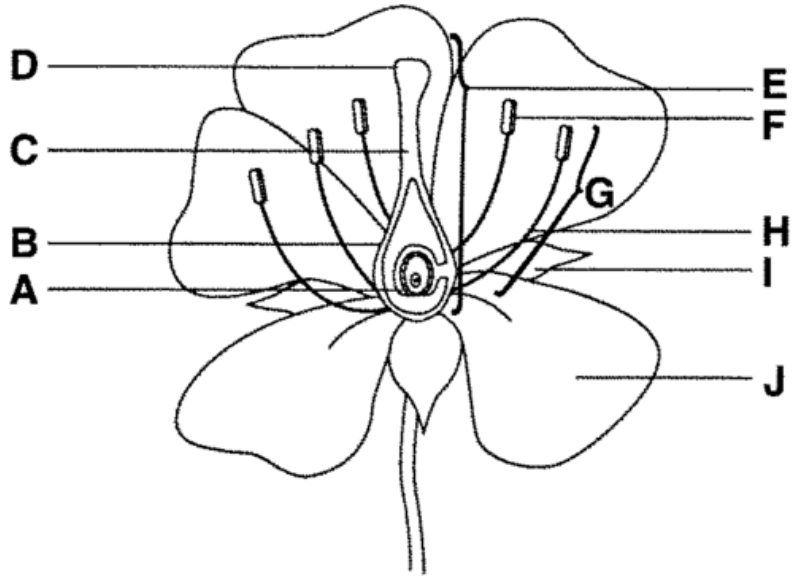
   b) How would this affect the transport of water in the phloem? **[2 marks]**

7. Distinguish between primary succession and secondary succession. **[2 marks]**

8. List two advantages of asexual reproduction. **[2 marks]**

9. Describe the process of grafting. **[3 marks]**

10. Label the following diagram. **[10 marks]**



A		F	
B		G	
C		H	
D		I	
E		J	

11. Some pollen grains are dry and some are sticky.

a) Which would you expect to be carried on wind and which on the body of a pollinator? **[2 marks]**

b) Many people have pollen allergies. Suggest whether dry or sticky pollen would cause more allergies. Give reasons for your answer. **[2 marks]**

12. The direction in which sugars are transported depends on the location of source cells relative to sink cells.

    a) Explain how in places with four seasons, such as Canada, the direction of transport varies with the seasons. **[2 marks]**

    b) Suggest how the direction of transport could play a role in causing leaves to change colour in autumn. **[2 marks]**

13. Stems of plants have several important roles. In some plant species, such as most cactus species, the standard roles their stems play have been modified.

    a) In what ways are the roles of cactus stems modified? **[2 marks]**

    b) Explain how the climates in which most cactus species exist made these modifications necessary. **[2 marks]**

14. Explain how an adequate amount of water prevents a plant from wilting and explain why and how wilting occurs. **[2 marks]**