From the exercise on the evolution of flight.

1. a. Describe the different types of feathers. When did insulating feathers develop? (from 3)

b. When did the arms become as long or longer than legs? What ancestors show an out, flexible shoulder? What bird ancestors show a semilunate bone? (From 4)

c. What is *Archaeopteryx* and what structures does it share with extant reptiles and birds? What features do birds share with Saurischians, theropods and maniraptorans? When did feathers appear in the dinosaur line? (From 5.)

2. Why is phylogenetics considered more scientific than evolutionary systematics?