Sample Questions for Exam I

This sheet contains sample questions taken from previous Big Game Management Exams. All material covered to date is potential exam material. This sheet is meant to show you the types of questions I like to ask, so do not limit yourself to studying only material on this sheet. You should also look at all handouts provided in class and make sure you can explain the concept illustrated with each.

1. Write the common name of each species in the blank to the far right of the scientific name (0.5 pts each).
   Put a star (✱) in the blank next to the scientific name of each species in the Order Artiodactyla (3 pts).
   Put a check mark (✓) in the second blank next to the scientific name of each species that is a ruminant (3 pts).

   A. Tayassu tajacu 　✱ 　✓

   Followed by a 8-10 more species...

2. A. You are a biologist in Rocky Mountain National Park in northern Colorado. In planning for the future, your boss wants you to consider the impact of wolves, who may arrive in the park in the next 15 years, on the elk herds in the park. One of those elk herds has been stable at about 1200 animals for the past 10 years, recruiting only enough offspring to balance the natural mortality of adults. Because this herd is just maintaining itself, some people fear that the additional mortality from wolf predation would cause this elk herd to decline and disappear. What is your response to these concerns? (6 pts)

   B. An average wolf pack requires 72 elk/year. If the potential birth rate of elk in the area described above (before the herd grew to such a large population) is 0.3 and the death rate is 0.1, will this herd alone be able to support a wolf pack? Show your work (8 pts)

3. You are a biologist for TPWD in the Hill Country and your boss is preparing for a public meeting to set management goals for mountain lions. Your boss asks you to prepare a list of different views likely to be expressed at the meeting and you decide that people representing the values listed below are likely to be represented. For each value, provide the following 3 pieces of information: 1) a short description of each value; 2) a group likely to have that value (for example farmers, duck hunters, or home owners); and 3) the size of mountain lion population (small, moderate, or large) that group would desire. (16 pts)

4. Your boss also asks you to provide a framework for a harvest program for mountain lions. You panic until you remember your Big Game Management class and the 4 step process a person should follow for an effective harvest program. One of the steps is to set a goal for managing the population. What are the other 3 steps? (6 pts)

5. Why does it make sense that populations should have at least one factor regulating their growth (5 pts)?

6. Describe how an intrinsic factor could regulate population growth (5 pts).

7. Under what conditions would livestock grazing help a white-tailed deer management program in southern Texas? (5 pts)

8. You just finished a spotlight survey of a 10,000 ha ranch for which you are the biologist. During 5 different surveys, you drove 100 km of transects and the average distance that a deer could be seen from the transect was 50 m (remember you count deer on both sides). You counted 10 yearling bucks, 12 medium aged bucks, 8 mature bucks, 70 does and 30 fawns. Answer the following questions and show your work to receive full credit.

   A. How much area did you survey? (remember that 1 km = 1,000 m and that 1 ha = 10,000 m²) (3 pts)

   B. What percent of the ranch area did you survey? (2 pts)

   C. What is the deer density (bucks+does+fawns) on this ranch? (2 pts)