True/False (1 point each)

T / F 1. Odor making agents that are sprayed on a newly formed group of pigs are very effective in reducing the amount of fighting that occurs in newly formed groups of pigs.

T / F 2. Sows in heat will usually seek out boars.

T / F 3. Sows coming into heat may attempt to ride other sows.

T / F 4. According to Kilgour, a gilt should be bred the first time by a young inexperienced boar.

T / F 5. If you remove a pig from an established group of pigs for several days, if the pig is low ranking the pig will most likely not be attacked when returned to the group, but the pigs will remember and attack the most dominate pig when that one is returned to the group.

T / F 6. Research has shown that mixing groups of gilts together and transporting them when they are about to come into heat on their own will trigger their first estrus.

T / F 7. Newly born piglets show a distinct preference for the rear teats of a sow. The first born usually end up near the rear.

T / F 8. When calves are 2 to 3 days of age, they will typically spend most of their time laying out in small groups with other calves.

T / F 9. When calves are 1 to 3 weeks of age, they will typically spend the nights away from their dams, staying in “creches” or “nursery centers” with other calves.

T / F 10. When a cow is being harassed by another animal, the cow can be expected to seek relief by heading to the middle of the herd.

T / F 11. Shortly before cows calve, they often become aggressive and actually pick fights with other cows.

T / F 12. Kilgour observed that when groups of calves are being transported, the calves take set positions in the truck and rarely adjust or move about.

Multiple Choice (1.5 pts)

_____ 1. What is the normal function of the orange piece of plastic that is mounted on the beak of the rubber chicken?  A) reduce the ability of the wearer to peck at and injure other birds;  B) decrease the tendency of the bird to waste feed;  C) reduce the tendency of birds to sham peck (peck at “flies” that do not exist);  D) no real function, just something Dr. Friend made up to reduce tension during the exam.

_____ 2. The Australian video on cattle handling said that when herds of cattle are being moved, the herd is made up of several distinct sub groups, and that the most insecure cattle were located: A) in the front;  B) around the outside edge;  C) in the middle;  D) at the very back.

_____ 3. The Australian video on cattle handling also showed very nicely that if you want cattle that are in a single file chute to move forward: A) you should walk along the chute toward the rear of the cattle;  B) walk along the chute in the direction the cattle are lined up;  C) back away and take a position at the edge of their flight zone;  D) take a position 45 degrees behind the lead animal near the shoulder.
4. Under natural conditions, pigs prefer what type of habitat: A) scrub or light forest, B) established forest (big trees), C) hilly, open ground, D) open range.

5. The sows you saw in the video who were farrowing on pasture: A) did not combine their litters until forced to do so by people, B) most of the sows had combined litters within several hours of farrowing, C) combined litters after they reach 4 to 6 days of age, D) were aggressive and never did combine their litters.

6. Allowing an estrous sow to hear the sound of a boar grunting (his 'love song'), will increase your chances of detecting whether the sow is in heat without a boar present to: a) 90%; b) 80%; c) 75%; d) 50%.

7. Standing estrus in sows usually lasts: A. 6 hours; B. 12-16 hours; C. 24 hours; D. 38-60 hours.

8. About how many pigs per litter of 10 pigs are usually saved from overlaying by the sows when they farrow in well-designed farrowing crates compared to turn-around crates, small pens without crates, or indoor pens that also have an outside area? A. .5; B. 1; C. 3; D. 5; E. none.

9. About how many pigs per litter of 10 pigs do we expect to die from overlaying by sows farrowing in well-designed farrowing crates? A. .5; B. 1; C. 3; D. 5; E. none.

10. Young calves (more than a day or two of age) usually nurse about: A) once an hour, B) every two hours; C) once every three hours; D) once every five hours.

11. When artificially feeding calves, Kilgour recommends feeding them three times a day and controlling the milk flow so that it takes about A) 1-2, B) 3-5, C) 10, D) 15 minutes to consume a meal.

12. During some forms of religious slaughter, the throat of calves is cut without prior stunning. How long does it take the calves to become insensible: A) 85 seconds; B) 30 seconds; C) 15 seconds; D) just a few seconds.

Short Answer (3 pts each)

1. Commercial pig producers usually try to help pigs adjust to weaning & removal of their mother by doing what practice?

2. In the pig handling article by Temple Grandin, Temple said that this device was one of the most useful devices for restraining pigs during research. There was also a photo of the device in her article with a caption that said it was the best restraint for pigs because the a pig in it often fell asleep. Describe or name the device.

3. What two factors seem to be involved in piglets being savaged (attacked) by their dame according to Kilgour?
   1. 
   2. 


4. What is the sequence of behaviors that occur during a piglet suckling episode? It is nicely described in Kilgour’s book.

5. List three things that are frequently tried to help reduce aggression among newly grouped pigs. Kilgour listed a large number, but they do not necessarily work.
   1.
   2.
   3.

6. The “Pig Park” that was established near Edinburgh, Scotland, was especially interesting to applied ethologists (according to Kilgour) because: (be sure to explain)

7. The French film on swine reproductive behavior demonstrated that
   _____ % of gilts who are in estrous will stand for a person with no other cues from boars.
   _____ % of gilts who are in estrous will stand for a person with odor and sound of a boar present.

8. When you were out at the “feeding floor” for lab (the pens that were partially under the tall roof), we talked about how to design a feeding floor pen to best utilize the natural defecation patterns of pigs. Draw a floor diagram of a pen that would best work with their defecation behavior, and a floor that would confuse the pigs. Be sure to indicate the major features (feeder, waterer, slatted floor & solid floor) in the pen. TWO DRAWINGS

9. Bush Gardens in Denver keeps three pens of pigs for their petting zoo. Occasionally they have a problem with tail biting in the pens. You impress your supervisor at Bush Gardens and become their head animal supervisor because you know three possible causes of tail biting. List them below?
   1.
   2.
   3.

10. During the lab at the Beef Center, we rode in a cattle trailer that had a floor that had some nice attributes for cattle. Describe two of those good features of the floor:
11. Regarding the basic behavior of sows and pigs before, during and after farrowing, write in the average time that the following events occur.

   Time before farrowing that sows start nest building: __________
   Average duration of farrowing: __________
   Time after farrowing that sows will hopefully lay still in their nest before getting up if conditions are fine: __________

12. Describe three methods of inducing “tonic immobility” in chickens that we tried during poultry lab.

   1.
   2.
   3.

13. Kilgour described a number of signs that a cow is about to give birth, what are three:

   1.
   2.
   3.

14. List two species other than birds in which the “tonic immobility” response occurs and describe a possible function (from an evolutionary standpoint) of tonic immobility in that species. List a species and then possible function.

   1.
   2.

15. Describe the method poultry producers will use when they are starting off a batch of 10,000 day-old chicks (we talked about this in lab and class) in a building.

16. Battery cages are being phased out in Europe and California for commercial egg laying farms. Describe the main features related to behavior of the new caging system that is being introduced.
17. You were at a meeting of the Texas Department of Agriculture's task force on Organic Food Production last week. Someone thought that for a dairy farm to be humane and raise their calves more naturally, they should allow each calf to stay with its mother for 3 days before the calf is removed to be sold or hand reared. Applying what you learned in ANSC 310, you agree / disagree explaining:

18. Who proposed the model to the right as a way of explaining the observation that when animals are not allowed to perform certain behaviors for a period of time, they often perform that behavior at a much higher rate when allowed to perform that behavior?

Name:

Give an example of a behavior “A” could represent:

Give an example of a behavior “B” could represent:

19. Neck tethers and girth tethers are not recommended as a form of keeping sows and gilts during gestation because:

20. According to Kilgour, when rearing newly born litters of pigs, the sow and litter accommodation should have (in regards to the piglets, he listed three):

1. 

2. 

21. Chickens who are not confined spend their day on the ground foraging over wide distances, socializing and dust bathing. What do they do at night?

22. Restraining pigs with a simple snout noose capitalizes on what behavioral trait of pigs?

23. Kilgour included a floor plan for a feral pig trap. Draw the floor plan and describe what behavior of pigs is utilized that will help increase the chances of catching pigs and not cattle or goats.
Comprehensive part - 38 pts.

True/False (1 pt each)

T / F 1. Lorenz observed that when his water shrews were actually hunting and about to capture prey, they were exclusively guided by sight.

T / F 2. When Lorenz's male jewel fish ended up with one of its babies and a piece of worm in its mouth, the fish mistakenly ate both the worm and the baby fish.

T / F 3. Rams urinate on themselves to increase their odor during the rut just like bucks.

T / F 4. Location within the Northern versus Southern part of the U.S. does not affect the timing of estrus in sheep.

T / F 5. A droving dog was used in England to gather up sheep in pastures, and bring the sheep to the shepherd.

T / F 6. Donkeys will usually "teeth clap" when they are in estrus, but horses do not.

T / F 7. It is difficult telling when a member of a group of female donkeys is in estrus because unlike cattle, donkeys do not usually mount each other when in estrus.

T / F 8. The Pryor Mountain feral horses were territorial, they set up and defended specific grazing areas that are rather large.

Multiple Choice (1.5 pt each)

___ 1. When male jewel fish turn a dull color: a) they entered a new environment and must change color to blend in with the environment; b) they have met a rival male and are preparing to perform a ritualized dance or fight; c) he likely lost a fight or is ill; d) they have pair-bonded with a female and have settled down to family life.

___ 2. Lorenz conducted a behavioral analysis to determine the ancestry of dog breeds. Although recent research has found that all domestic dogs came from wolf (lupus) stock, Lorenz thought that a fair number of breeds originated from: a) ancestors of the basenji; b) cape hunting dog; c) esquimaux dogs; d) fox; e) golden jackal.

___ 3. Song birds most often sing: a) in solitude (when "unhappy"), b) when "happy", c) in the presence of a female, d) just prior to a fight.

___ 4. According to Lorenz, holding something black in your hands is a very potent releasing stimuli that stimulates jackdaws to: a) perform their mating ritual; b) flee or fly away; c) show submission; d) attack.

___ 5. Stressing an animal during estrous by making it extremely frightened, for example, may delay or eliminate the peak in: A. ACTH; B. leutenezizing (LH) hormone; C. estrogen; D. prolactin; that is responsible for ovulation.

___ 6. The result of a momentary pattern of stimulation of the nervous system and brain: a) thought; b) learning; c) sign stimuli; d) critical period.

___ 7. Part of the nervous system that controls wakefulness and regulates/filters information from the body to the brain: a) reticular formation; b) cerebellum; c) spinal cord; d)
8. Although all bulls are potentially dangerous, the breed that is most associated with injuring people is: A) Holstein; B) Hereford; C) Brahman; D) Jersey.

Short Answer (3 pts each)

1. Lorenz believes that when in the course of its evolution, a species of animals develops a weapon which may destroy a fellow member at a single blow, then, in order to survive, that species must also develop what type of behavior along with that weapon?

2. What is the “vomeronasal organ” and where is it located?

3. Describe the difference between classic ethology and psychology.
   
   ethology emphasized:
   
   psychology emphasized:

4. Under natural conditions, young bulls usually leave the herd into which they were born when they are about 2 years old. Briefly describe what they do (socially) from the time period starting after they leave their maternal herd until they become mature (about 5 years of age).

5. Given that social rank or dominance determines an individual’s priority of access to resources such as feed, and that getting enough to eat is very important for high producing dairy cows, why do we usually not find a relationship between a dairy cow’s dominance and milk production within a herd? (what do farmers do to reduce the effect of social rank)

6. (1.5 pt) Who proposed the model to the right as a way of explaining the observation that when animals are not allowed to perform certain behaviors for a period of time, they often perform that behavior at a much higher rate when allowed to perform that behavior?

   Name:

7. (1.5 pt) How does the model to the right help explain stereotypic
behavior?