(16) 1. List the four phases of the estrous cycle and describe each.

- Proestrus - This is before estrus when estradiol is produced; follicular growth begins.
- Estrus - This is when the female will accept the male. There is a surge of LH, which causes the behavior of the animal when in estrus. Ovulation occurs.
- Midestrus - When progesterone is produced; the corpus luteum is produced. Changes of cells, uterus ready for implantation.
- Diestrus - There is a period of time. 1) If the female is pregnant the pituitary will no longer produce LH & FSH. This is maintained under a functional CL. 2) If the female is not pregnant the CL will regress within 3 to 7 days & progesterone stops being produced.

(10) 2. Draw and label the parts of the sperm.

(6) 3. List the types of Spontaneous Ovulators.

- Polyestrus - human, cow, sheep
- Normal Polyestrus - sheep, horses
- Monoestrus - ex dog when it only ovulates once a season
4. Explain the major differences in the cervix of the horse, pig and cow.

- Horse
- Cow
- Pig

The pig is the hardest to find the cervix because it is not straight like the cow's. The cervix twists around. The cow is pretty easy. It is in a straight line. The horse - straight folds of skin.

5. List five functions of the placenta.

1. Keeps bacteria out of fetus
2. Mechanical protection
3. Removes waste
4. Transports nutrients
5. Produces hormones

6. Define DHI (Dairy Herd Improvement) and its significance in improving milk production.

DHI - records of herds. This helps in improving milk production because people can go and look at different records. If see what things such as bull's may or may not work in the herd. The result of this is general impor

7. Explain the LH surge (luteinizing hormone surge); include when it begins and purpose.

The LH surge happens during estrus. The purpose of this hormone is to make the animal ovulate.
(6) 7. What makes Colostrum unique.
    It is a mother's first milk when a new young is born. The young's body is not prepared
to digest mare's milk so the colostrum has more of the nutrients and antibodies -
relied upon when it was still in the mother. It also is a way that the mother gives
more immunities to the young. High amount of fat for energy.

(5) 8. Which is scarier, a ghost, a goblin, or an AVS 109 Test???

(5) 9. How is passive immunity given from the cow to its offspring?
    Through the proteins in its milk. Calf takes milk in LRQ intestines are
    open first 34 hours, calf takes milk in 8 immune globulins are absorbed.

(7) 10. List the part of the male reproductive tract.
    1. Scrotum
    2. Penis
    3. Vas deferens
    4. Seminal vesicle
    5. Cowpers
    6. Testicles
    7. Prostate
    8. epididymus
    9. v. v.:---
    10. 

(16) 11. Define:
    a. Whole Milk - has all the original fat.
    b. infundibulum - part of the pituitary gland.
    c. Induced ovulators - only ovulate when mating.
    d. Morula - 10 cell stage. Embryo. goes to 32 cell blastocyst.
    e. Estrus - when a female will accept a male.
    f. Corpus Luteum - yellow body. surrounded by a corpus luteum. develops egg when fertilized.
    g. Parturition - when an animal gives birth.
    h. Acrosome - enzymes in sperm on head of sperm.