MULTIPLE CHOICE

For each question below, circle the correct answer. Each question has only one correct answer.
(2 pts each)

1. The enzyme of the sperm that digests the granulosa cells is
   A. ZPase
   B. acrosin
   C. hyaluronidase
   D. none of the above

2. Split estrus occurs in the
   A. sow
   B. mare
   C. cow
   D. queen

3. The majority of fetal growth occurs in
   A. the first trimester
   B. the second trimester
   C. the third trimester
   D. none of the above

4. The hormone animals use to measure day length is
   A. seratonin
   B. melatonin
   C. oxytocin
   D. growth hormone

5. A female that is seasonally polyestrous is the
   A. sow
   B. woman
   C. cow
   D. ewe

6. The outermost layer of the placenta is the
   A. chorion
   B. amnion
   C. allantois
   D. yolk sac
7. In a cotyledonary placenta, the maternal part of the placentome is called a
   A. villi
   B. button
   C. cotyledon
   D. caruncle

8. The membrane of the placenta that forms from the mid gut of the embryo is the
   A. amnion
   B. chorion
   C. allantois
   D. yolk sac

9. The removal of the CL at any stage of gestation will cause abortion in
   A. women
   B. mares
   C. ewes
   D. cows

10. Where is melatonin produced?
    A. hypothalamus
    B. pineal gland
    C. adrenal gland
    D. anterior pituitary

11. Parturition is initiated by
    A. By maturation of the uterus
    B. Development of fetal movement
    C. Maturation of the fetal brain
    D. Maternal factors

12. Abortion is
    A. A normal term fetus that is born dead
    B. The protrusion of the uterus from the vagina
    C. A difficult delivery
    D. Expulsion of the fetus before the normal length of gestation for the species

13. The longest period of the estrous cycle in cows is
    A. diestrus
    B. proestrus
    C. estrus
    D. metestrus

14. Progesterone prevents the myometrium of the uterus to respond to
    A. melatonin
    B. oxytocin
    C. PGF2α
    D. estrogen
15. Match each animal with the correct placental attachment. (2 pts each)

   Animal   | Placenta
   -------- | --------
   C cat    | A. diffuse
   B ewe    | B. cotyledonary
   D human  | C. zonary
   A mare   | D. discoid

16. Where does fertilization occur? (2 pts)
   In the ovum of the female reproductive tract

17. Blood is diverted in the fetal heart to prevent flow to what fetal organ? (2 pts)
   The lungs

18. Put the following in the order they would appear. (4 pts)

   4 fetus
   2 morula
   1 zygote
   3 Trophectoderm

19. What tissue produces PGF₂α causing regression of the corpus luteum? (3 pts)
   The uterus

20. Give 2 reasons why to perform embryo transfer. (3 pts)
   To use sterile females, genetically superior females
   To protect and produce endangered species and rare breeds

21. Give an example of a tissue that arises from each of the germ layers. (2 pts each)

   ectoderm   | skin
   mesoderm   | muscle
   endoderm   | intestine - liver

RESERVED
Pre Vet
Van Derwell
C
22. What is meant by “maternal recognition of pregnancy”? What is the critical event that occurs during this process? (5 pts)
   Fetus sends signal of pregnancy
   This is where the female recognizes that she is pregnant.
   Thus maintaining the CL. The uterus must produce PGF2α to send back to maintain the CL so that it can continue producing progesterone until the fetus has developed some. The embryos must attach itself to the wall of the uterus through the placenta.

23. What is superovulation, and what is required to do it? (5 pts)
   Superovulation is when a female produces more than one egg at ovulation. This is so more offspring can be produced when in embryo transfer. EST is required to do this.

True or False (2 pts each)

24. T Embryos can be stored frozen just like semen.

25. F Polyspermy is prevented by actions of acrosin.

26. T Parthenogenesis in turkeys always leads to females.

27. F All eggs pass into the mare uterus.

28. T Eggs can be sexed.

29. F Corpora lutea can be palpated on the mare ovary.

30. T There are six layers of tissue layers between blood supplies in ruminant placentas.

31. T Humans have a hemochorial class of placenta.

32. F Placentas grow slowly in farm animals.

33. F The horse ovary has the cortex on the outside and medulla on the inside.

34. F Decapitation of a fetus results in its birth.

35. F Capacitation of sperm occurs in the epididymus.

36. T The umbilical vein contains oxygenated blood.

37. T Progesterone is the hormone of pregnancy.

38. T Cortisol from the fetus initiates maternal actions leading to parturition.

39. F One injection of PGF2α will affect one-quarter of the cows in a herd.

40. T Relaxin is produced by the ovary to loosen the path for parturition.