

1233

1. When utilizing artificial insemination (AI) it is best to breed dairy cows and heifers
 - A using ice-cold (32 F) straws of semen that are inserted directly into the cervix.
 - B about 12 hours after the onset of standing estrus.
 - C about 46 hours after the end of standing heat.
 - D during diestrus.
 - E about 46 hours after the onset of standing heat.
 - F during metestrus bleeding.
2. Inunction administration of a hormone solution is the same as
 - A per os administration.
 - B transdermal administration.
 - C using a CIDR.
 - D rectal administration.
 - E using a pessary.
 - F sublingual administration.
3. The length of gestation in cattle is approx. _____.
 - A 284 days
 - B 7 months
 - C 22 months
 - D 114 days
 - E 21 days
 - F 5 months
4. When studying animal anatomy, you often use the terms cranial and caudal (they are antonyms). However, when working on the head of an animal, cranial is usually replaced by this term:
 - A distal
 - B lateral
 - C proximal
 - D ipsilateral
 - E rostral
 - F oblique
5. In the porcine ovary, an antrum is
 - A always producing 5 alpha-reductase.
 - B the structure that connects the ovary to its blood supply.
 - C the cavity within a follicle filled with fluid.
 - D always producing eCG.
 - E an old corpus albicans.
 - F famous for producing hCG at estrus.
6. When performing morphometric analysis of a tissue, this relationship is assumed:
 - A age-related tissue changes usually do not occur.
 - B 50 percent of the area view is full of artifacts.
 - C 10 percent of the area view has been distorted.
 - D area view has no reliable relationship to the volume aspect of the tissue.
 - E percentage of a component on a 2 dimensional view (area) is equal to the 3 dimensional view (volume).
 - F 50 percent of the 3 dimensional view has undergone shrinkage.

7. The CIDR device contains a hormone. The letters CIDR stand for:
- | | |
|------------------------------------|--------------------------------------------------|
| A Cranial Implant or Distal Rete | B Canine Idiopathic Dihydrotestosterone Releaser |
| C Controlled Internal Drug Release | D Cattle Internal Drug Receptors |
| E Caprine Idiopathic Drug Releaser | F Canine Infectious Dimorphic Receptors |
8. Whelping is a term used to denote the
- | | |
|-------------------------------------------------|---------------------------------|
| A process of estrus and its behaviors in mares. | B process of mating in horses. |
| C act of weaning in goats. | D act of giving birth in dogs. |
| E act of giving birth in horses. | F act of giving birth in swine. |
9. When performing rectal palpation in beef cows, the cervix is a landmark and feels like a(n)
- | | |
|-----------------------------------|--------------------------------------------------------|
| A T-shaped, soft banana. | B deflated football. |
| C large basketball. | D group of small, button-like structures. |
| E T-shaped, rock-hard metal pipe. | F rope-like, firm structure (much like a turkey neck). |
10. Testosterone is converted into dihydrotestosterone by _____ .
- | | |
|---------------|---------------------|
| A cholesterol | B amylase |
| C PGF2 alpha | D polymerase |
| E aromatase | F 5-alpha reductase |
11. In cattle, PGF-2 alpha is a known _____ agent.
- | | |
|------------------|---------------|
| A astringent | B chromolytic |
| C bacteriophagic | D luteolytic |
| E mitogenic | F gametogenic |
12. The winking of the _____ occurs when _____ are in or very close to estrus.
- | | |
|-----------------------------------|-------------------------|
| A perilumbar foramen, nanny goats | B distal fornix, sows |
| C tailhead, cows | D proximal fornix, sows |
| E paralumbar fossa, ewes | F vulva, mares |

13. The "membrane slip" can be used to determine
- | | |
|---------------------------------|--------------------------------|
| A pending parturition in goats. | B pending parturition in dogs. |
| C pregnancy in cattle. | D Milk Fever in dairy cattle. |
| E stage of estrus in mares. | F Hardware Disease in cattle. |
14. Rod and his graduate student made their own CIDR years ago using foam rubber. What hormone was in the device?
- | | |
|------------|---------------------|
| A LH | B estradiol-17 beta |
| C oxytocin | D hCG |
| E GnRH | F progesterone |
15. About 24-28 hours after the LH surge, ovulation occurs in dairy cows. What other physiological event is coincident with this LH surge?
- | | |
|-----------------------------------------------------|----------------------------------------------------|
| A The corpus albicans starts producing progesterone | B The corpus albicans starts producing estradiol |
| C Milk let-down | D The corpus albicans stops producing progesterone |
| E End of estrus | F Onset of estrus |
16. In testicular tissue, _____ are always found in the extratubular space.
- | | |
|-------------------|-----------------------------------|
| A granulosa cells | B mature sperm cells (with tails) |
| C renal cells | D tail-less sperm cells |
| E Sertoli cells | F interstitial cells |
17. Select the function of the pampiniform plexus.
- | | |
|-------------------------------------------------------------------|--------------------------------------------------------|
| A Allows for extension of the bull's penis. | B Lowers the temperature of testicular arterial blood. |
| C Supplies afferent sensory nerves for reflex ovulators (cat). | D Stores blood within the bovine placenta. |
| E Collects newly released sperm cells within the ram's testicles. | F Stores porcine ova until fertilization by sperm. |
18. This bovine follicular hormone tends to cause decreased FSH release from the anterior pituitary.
- | | |
|---------------|-------------|
| A cortisol | B aromatase |
| C GnRH | D esterase |
| E PGF-2 alpha | F inhibin |

19. On day 18 of the bovine estrous cycle, the _____ produces PGF-2 alpha which will then promote _____.
- A embryo, luteolysis
 - B uterus, luteolysis
 - C cervix, uterine contractions
 - D pituitary gland, estrus
 - E fetus, luteolysis
 - F ovary, standing estrus
20. Select the one correct statement below.
- A Semen is composed of 90% sperm and 10% fluid.
 - B Progesterone is produced by the uterus.
 - C A corpus albicans will produce relaxin during parturition.
 - D Semen is composed of 10% sperm and 90% fluid.
 - E An atretic follicle will become a corpus albicans.
 - F Progesterone is produced by the oviduct.
21. If an adult boar has a total testicular volume of 3,000 cc, it would have approx. _____ cc of that volume occupied by seminiferous tubules.
- A 150
 - B 300
 - C 1,500
 - D 2,100
 - E 210
 - F 30
22. Castration of a adult domestic boar results in _____ blood levels of _____.
- A increased, eCG
 - B decreased, luteinizing hormone
 - C decreased, hCG
 - D increased, estradiol
 - E decreased, follicle stimulating hormone
 - F increased, luteinizing hormone
23. When collecting embryos from a donor dairy cow, the best time to collect embryos is _____ days after breeding.
- A 14
 - B 3
 - C 21
 - D 7
 - E 90
 - F 42
24. Select the parameter that tells dog breeders their bitch will soon began the parturition process.
- A Elevation in body temperature to about 107 F.
 - B Blood-tinged mucus discharge from the vagina.
 - C Elevation in body temperature to about 104 F.
 - D Uterine contractions that can be seen through the left-side abdominal wall.
 - E Clear mucus discharge from the vagina.
 - F Drop in body temperature to about 98 or 99 F.

25. The _____ acts as a heat exchange unit in the boar so the _____ can remain cooler than body temperature.

A parafovea network, ovary

B pampiniform plexus, testis

C gubernaculum, brain

D parafovea network, testis

E inguinal crest, testis

F rete, testis

26. Each bovine gamete is formed by _____ and gametes are _____ cells.

A polygenesis, anuclear

B neogenesis, hydrophilic

C meiosis, haploid

D ovulation, diploid

E mitosis, diploid

F ovulation, anuclear