

## ACT Certifying Examination Multiple Choice Questions and Answers

- Question:** Which disease is most likely to be transmitted by embryo transfer?
- a. Infectious bovine rhinotracheitis
  - b. Brucellosis
  - c. Foot and mouth disease
  - d. Bovine leukosis
  - e. Bovine virus diarrhea

Answer: e

### References

Guerin B, Nibart M. Sanitary risks related to embryo transfer in domestic species. *Theriogenology* 1997;47:33-42.

Booth JP, Stevens DA, et al. Detection of bovine virus diarrhea in ovarian and oviductal tissue. *J Reprod Fertil. Abstract Series No. 9*, July 1992:28.

Bielanski A. Non-transmission of bacterial and viral microbes to embryos and semen stored in the vapour phase of liquid nitrogen in dry shippers. *Cryobiology*. 2005;50:206-210.

- Question:** Development of equine allantochorionic microcotyledons occurs in all of the following areas EXCEPT:
- a. the gravid uterine horn.
  - b. the nongravid uterine horn.
  - c. the uterine body.
  - d. the nongravid uterine horn and uterine body.
  - e. the area overlying the endometrial cups.

Answer: e

### References

Asbury AC, LeBlanc MM. The placenta. In: McKinnon AO, Voss JL, eds. *Equine reproduction*. Philadelphia: Lea & Febiger, 1993;509-516.

Immegart HM. Abnormalities of pregnancy. In: Youngquist RS, ed. *Current therapy in large animal theriogenology*. Philadelphia: WB Saunders Co, 1997;113-129.

Bucca S, Fogarty U, Collins A, Small V. Assessment of fetoplacental well-being in the mare from mid-gestation to term: transrectal and transabdominal ultrasonographic features. *Theriogenology*. 2005;64:542-557.

- Question:** Maternal recognition of pregnancy in the mare is proposed to:
- a. result from embryonic production of interleukin-like substances.
  - b. result from endometrial production of prolactin and sialic acid.
  - c. depend on the mobility of the conceptus within the uterine lumen.
  - d. result from the production of equine chorionic gonadotropin.
  - e. result from inhibition of systemic prostaglandin F2 alpha production from the endometrium.

Answer: c

#### References

Bazer FW, Vallet JL, Roberts RM et al. Role of conceptus secretory proteins in establishment of pregnancy. *J Reprod Fertil* 1986;76:841-850.

Sharp DC, McDowell KJ, Withenauer J et al. The continuum of events leading to maternal recognition of pregnancy in mares. *J Reprod Fertil Suppl* 37: 101-107, 1989.

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Hinrich K. Update on equine ICSI and cloning. *Theriogenology*. 2005;64:535-541.

- Question:** Which of the following has NOT been attributed to ingestion of zearalenone?
- a. Reduced litter size in gilts.
  - b. Preputial enlargement in boars.
  - c. Irregular interestrus intervals in sows.
  - d. Agalactia in gilts.
  - e. Increased incidence of stillbirths in sows.

Answer a

#### References

Dial GD, Marsh WE, Polson DD, Vaillancourt JP. Reproductive failure: differential diagnosis. In: Leman AD, Straw Be, Mengeling WL, D'Allaire S, Taylor DJ, eds. *Diseases of swine*. 7th ed. Ames, Iowa: Iowa State University Press, 1992;88-137.

Osweiler GD. Mycotoxins. In: Straw BE, D'Allaire S, Mengeling WL, Taylor DJ, eds. Diseases of swine. 8th ed. Ames, Iowa: Iowa State University Press, 1999;731-755.

Long GG, Turek J, Diekman MA, Scheidt AB. Effect of zearalenone on days 7 to 10 post-mating on blastocyst development and endometrial morphology in sows. *Vet Pathol* 1992;29:60-67.

Long GG, Diekman MA. Effect of purified zearalenone on early gestation in gilts. *J Anim Sci* 1984;59:1662-1670.

Kauffold J, Rautenberg T, Hoffman G, Beynon N, Schellenberg I, Sobiraj A. A field study into the appropriateness of transcutaneous ultrasonography in the diagnoses of uterine disorders in reproductively failed pigs. *Theriogenology*. 2005;64:1546-1558.

- Question:** Regarding pregnancy diagnosis in the bitch using acute phase proteins, which of the following is INCORRECT:
- The test is based on the changes in C-reactive protein and fibrinogen.
  - The Initial increase occurs beginning on day 20 and peaks at day 40.
  - In a normal bitch, a serum fibrinogen value greater than 300 mg/dl is nearly 100% indicative of pregnancy.
  - The test has numerous false negatives.
  - The test can be used to determine early pregnancy at the same time as for relaxin concentrations.

Answer      d

#### References

Hart AH. A rapid, accurate in-house pregnancy test for dogs. *Vet Forum* 1997;14:40-43.

Root Kustritz MV. Update on canine pregnancy diagnosis. In: Proceedings of the SFT Annual Conf. 1998;87-91.

Vannucchi CI, Mirandola RM, Oliveira CM. Acute-phase protein profile during gestation and diestrus: proposal for an early pregnancy test in bitches. *Anim Reprod Sci*. 2002;74:87-99.

Root Kustritz MV. Pregnancy diagnosis and abnormalities of pregnancy in the dog. *Theriogenology*. 2005;64:755-765.

- Question:** The seasonal variation in testicular size, weight, and daily sperm production in the stallion, is determined by the:
- a. number of Sertoli cells.
  - b. size of Leydig cells.
  - c. number of Leydig cells.
  - d. size of Sertoli cells.
  - e. size of the scrotum.

Answer a

#### References

Johnson L. Seasonal difference in equine spermatocytogenesis. *Biol Reprod.* 1991;44:284-291.

Johnson G, Carter K, Varner DD, Taylor TS, Blanchard TL, Rembert MS. The relationship of daily sperm production with number of Sertoli cells and testicular size in adult horses: role of primitive spermatogonia. *J Reprod Fertil* 1994;100:315-321.

Vidament M. French field results (1985-2005) on factors affecting fertility of frozen stallion semen. *Anim Repr Sci.* 2005;88:299-308.