

The Royal College of Veterinary Surgeons

**DIPLOMA IN VETERINARY REPRODUCTION EXAMINATION**

**PAPER I**

**(General Principles)**

**Monday 25 September 1995**

**10.00 a.m. to 1.00 p.m. (3 hours)**

*SEVEN* long-answer questions of which  
a candidate must choose *FIVE* questions

*Candidates are warned that illegible handwriting may result in examiners being unable to award marks for information which candidates intended to convey*

---

1. Discuss the control and function of the different patterns of uterine contractions:
  - a. during fertilisation
  - b. during parturition.
  
2. Describe the process of *spermatogenesis* and *spermiogenesis* and identify the stages at which primary and secondary abnormalities occur.
  
3. Discuss the recruitment of ovarian follicles prior to ovulation. Reference should be made to monovular and polyovular species.
  
4. Compare and contrast *psuedopregnancy* in the mare and bitch and outline methods of treatment used in the bitch.
  
5. Discuss the use of prostaglandins in domestic animals.
  
6. Identify the mechanisms governing the role of light in reproduction in domestic animals.
  
7. Describe the role at present suggested for the *SERTOLI* cell in male reproduction.

The Royal College of Veterinary Surgeons

**DIPLOMA IN VETERINARY REPRODUCTION EXAMINATION**

**PAPER II**

**(In-depth subject: Cats and Dogs)**

**Monday 25 September 1995**

**2.00 p.m. to 5.00 p.m. (3 hours)**

**SEVEN long-answer questions of which  
a candidate must choose FIVE questions**

**Candidates are warned that illegible handwriting may result  
in examiners being unable to award marks for information  
which candidates intended to convey**

- 
1. Discuss the methods available for termination of late and early pregnancy in the bitch and indicate the pros and cons of each.
  2. Discuss the factors which influence ovulation in the cat. What implications do they have on the planning of practical mating arrangements?
  3. Discuss the importance of:
    - a. nutritional imbalances
    - b. infectious agentsas a cause of pregnancy failure in the cat.
  4. Describe the manifestations and treatment of chronic endometritis in the cat.
  5. **List** the methods available for suppression of oestrus in the bitch and discuss the drawbacks for each.
  6. Discuss the condition of **eclampsia** and describe its occurrence in the bitch.
  7. What are the biological advantages of the organisation of the oestrus cycle in Canidae?
-

THE ROYAL COLLEGE OF VETERINARY SURGEONS

**DIPLOMA IN VETERINARY REPRODUCTION**

EXAMINATION

**PAPER I**

(Basic Sciences)

Monday 11 September 1989

10.00 a.m. to 1.00 p.m. (3 hours)

SECTION A

Long-answer questions

answer ONE question

allow approximately 1½ hours

---

1. Discuss the endocrine control of reproduction in the cyclical and pregnant mare.
2. Describe the endocrine functions of the placenta in domestic animals.

**SECTION B**

All TEN short-answer questions to be answered

in approximately 1½ hours

3. Compare pseudopregnancy in the dog and cat.
4. Describe the sexing of embryos by detection of H-Y antigen.
5. List the maternal and foetal factors determining the duration of pregnancy in mares.
6. Discuss the measurement of acute phase proteins as a method of pregnancy diagnosis in the bitch.
7. Describe the role of the vomeronasal organ in reproduction in male animals.
8. Discuss the mechanisms by which, in some species of domestic animals, milk secretion and suckling can cause ovarian inactivity.
9. Discuss the application of progesterone measurements to the determination of ovulation time in the bitch.
10. Describe the mechanisms involved in progesterone and oestrogen regulation of myometrial contractions.
11. List the causes of ejaculatory failure in stallions.
12. Discuss the heritability of the major factors influencing dystocia rates in cattle.

THE ROYAL COLLEGE OF VETERINARY SURGEONS

**DIPLOMA IN VETERINARY REPRODUCTION  
EXAMINATION**

**PAPER II**

(Clinical Aspects)

Monday 11 September 1989

2.00 p.m. to 5.00 p.m. (3 hours)

Answer FIVE questions out of six

1. Discuss pyometra in domesticated animals.
2. Describe the role of infectious agents in infertility in cats.
3. Discuss the availability and commercial application of aids to improve oestrous detection in dairy cattle when artificial insemination is being used.
4. Discuss the value of diagnostic ultrasound for the management of twin pregnancies in mares. What factors influence adoption of a standard routine to tackle the problems of twin pregnancies?
5. Describe the techniques available to allow synchronisation of oestrus and superovulation/embryo recovery in goats, with particular reference to the factors influencing the results obtained.
6. Discuss why first service conception rates in cattle, inseminated in oestrus, are only about 55%.

THE ROYAL COLLEGE OF VETERINARY SURGEONS  
**DIPLOMA IN VETERINARY REPRODUCTION EXAMINATION**

**PAPER I**

(Basic Sciences)

Wednesday 7 September 1988

10 a.m. to 1 p.m. (3 hours)

**PART II**

**SECTION A**

Long-answer questions

answer one question only

allow approximately 1½ hours

1. Discuss the factors responsible for seasonal reproduction in ewes and mares and the mechanisms involved in modification of their reproductive systems in response to these factors.
2. Following natural mating, describe sperm transport and maturation in the reproductive tract of female farm animals with special reference to the mechanisms involved, the timing of events and the quantitative aspects of the processes.

**SECTION B**

Ten short-answer questions to be answered

in approximately 1½ hours

3. Discuss the evidence for opioid modulation of luteinising hormone secretion in domestic animals.
4. Describe migration of embryos in the uterus of the mare.
5. Describe the mechanisms by which a ram perceives that a ewe is in oestrus.
6. Discuss the endocrine basis for genetic differences in ovine prolificacy.
7. Discuss the theories as to why a female calf, co-twin to a male foetus, should develop as a freemartin.
8. Discuss the endocrine factors associated with lactational anoestrus in sows.
9. Cow genetic indices (CGI's) are used increasingly in selecting animals to breed heifer replacements. What factors are taken into consideration in calculating CGI's and what advantages are to be gained by employing this scoring system?

P.T.O. FOR QUESTIONS 10, 11 AND 12.

10. Describe the events that occur to bring about placental separation in the cow.
11. Describe the changes that occur in the composition of mammary secretions in mares during the last three weeks of pregnancy.
12. By means of diagrams, show the patterns of oestrogens and progesterone in the peripheral blood of the adult female cat during the reproductive cycle when it is:
  - i. not mated
  - ii. mated but fails to conceive
  - iii. mated and carries a pregnancy to term.

THE ROYAL COLLEGE OF VETERINARY SURGEONS  
**DIPLOMA IN VETERINARY REPRODUCT ION EXAMINATION**

**PAPER II**

(Clinical Aspects)

Wednesday 7 September 1988

2 p.m. to 5 p.m. (3 hours)

Answer 5 questions out of 6

1. Discuss the repeat breeder syndrome in cows with particular reference to the role of the uterine environment and to the occurrence of embryonic death.
2. Discuss dog semen evaluation and preservation and artificial insemination of the bitch.
3. Describe defense mechanisms against the establishment of uterine infections in mares.
4. Describe the endocrinological changes that occur in the gilt around puberty and the techniques available for initiating and controlling the timing of this event.
5. Write short notes on EACH of the following:
  - i. preputial avulsion in bulls
  - ii. the relationship between body condition and sperm quality/quantity in bulls
  - iii. the influence of the sire in dystocia due to foetal/maternal disproportion in Friesian-Holstein cows.
6. Discuss the major infectious causes of ovine abortion in the UK with particular reference to control measures to prevent their occurrence and strategies to reduce the impact of an outbreak.