UNAM
UNIVERSITY OF NAMIBIA

FACULTY	**Health Sciences and Veterinary Medicine**		
DEPARTMENT	**Production Animal Clinical Studies**		
SUBJECT	**Theriogenology II**		
SUBJECT CODE	**V3843PT**		
DATE	**November 2024**		
DURATION	**3 hours**	**Marks**	**150**

Examiner: Drs FJ Bruwer & I Kaatura
Internal Moderator: Dr A. Samkange
External Moderator: Prof. D. Holm

This question paper consists of 5 pages, including this front page.

Instructions

Read the questions carefully
Answer ALL questions
Write clearly and concisely

Second Opportunity Examination Paper

1) During rectal examinations on mares on a stud farm a mare in oestrus is brought in for examination, 7 days after foaling down. On entrance into the examination crush pen, you noticed that her foal had a diarrhoea, soft putty-like faeces was noticed around the base of its tail. The foal appears normal with a 4+ habitus. ----------[4]

2) By applying an ultrasound during a rectal examination to the uterus of a mare, the following image is displayed on the monitor. Answer the relevant questions----------[5]



A) Describe the lesion present in above ultrasound picture [1]
B) Describe how this phenomenon has developed. [2]
C) How can you make use of this phenomenon to assist the owner in making appropriate decisions in handling this mare during this reproduction cycle. [2]

3) Covering a mare on foal heat is quite popular amongst Thoroughbred Breeders to ensure an earlier birth date the following year. ----------[6]
   A) How soon after parturition can a mare be covered in this scenario to minimize the possibility of an early embryonic death which will lead to the opposite effect of a later or no birth date the following season? [1
   B) Describe the logic of calculation how you arrived at this minimum period. [2]
   C) Describe a treatment protocol that will make it possible to achieve this goal in early ovulators. [2]
   D) How many days on average will they gain (foal earlier) if they manage to get the mare to conceive during this period? [1]

4) Describe the changes of the musculo-skeletal system of the pelvis of a cow, that is visible, during the last 10 days prior to parturition. ----------[4]

5) You were called out to a 5-year-old downer Jersey cow with a dystocia. On a vaginal examination the cervix is fully dilated, and the disposition and size of the foetus appears normal. What other factors should be considered in this case before applying traction? Give a short discussion. -----[5]

6) The owner of a 15-year-old pony seeks your advice on when to start observing her for assisted parturition. The breeding date is unknown. Being novice horse owners, you have to advise them specifically so that he can spend the shortest possible time observing her before parturition. -------
   ----------[5]
   A) What would your advice be to the owner to observe concerning the mare' constitution indicating that the end stage of pregnancy has been reached [2]

B) What other test can be done by the owner which is available from non-veterinary outlets? [2]

C) How would you advise the owner to interpret the test? [1]

7) A farmer wants to do parturition observation in his sheep in order to increase his neonatal survival rate, he prepared a shed with lights to observe those close to parturition for 24 hours a day. He asked you to assist with some additional reproductive technologies (excluding oestrus synchronization) to improve his ability to observe and assist every ewe during parturition. -----[6]

A) Which reproduction manipulation technique would make sense to advise your client that will assist him vastly to accomplish his endeavour.

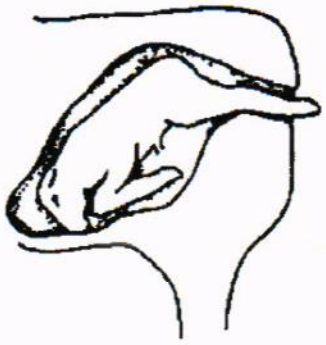
B) What are the most important records needed to be able to continue with the advice you gave?

C) What is the most important Infrastructure within the shed, that will be needed for this action

B) Which drugs will be needed for this manipulation that you should supply?

E) Give timeframes, when should your recommended program start? And when is the outcome suspected?

8) You are presented with a dystocia in a sheep as seen in the diagram below----------[7]



A) Describe the disposition of the foetus [2]

B) Describe the risks to the foetus and the ewe when applying traction to relieve the dystocia in this case? [5]

9) A beef farmer, a reproduction physiologist, called you out to investigate reason for poor oestrus expression in his herd. He is a seasonable breeder and noticed large changes of some of the reproductive parameters from year to year. These parameters include; interval changes from parturition until first oestrus, oestrus intensity and conception rates. Discuss the different causes, physiological or other external factors, that will lead to low reserves and releases of luteotropic hormone (LH), inhibiting reproduction function during the early postpartum period. -------- [6]
Any 6 of the following.

10) Explain why one should use corticosteroids instead of prostaglandin to induce parturition in a cow when the survival of the neonate is important. ----------[2]

11) The farmer accidently injected a pregnant cow with $PGF_2\alpha$ after you have confirmed pregnancy to be at least 6 months. A week later the cow has not aborted and you inform the farmer that there are two possible outcomes. She could carry the pregnancy and deliver (i) a calf two weeks before full term or ii) carry the calf to full term. ---+----------[3]

A) What is the reason for not aborting after the $PGF_2\alpha$ injection?

B) Why may she give birth two weeks before her due date?

C) Why could she carry the calf to full term? [3]

12) *Streptococcus zooepidemicus* is by far the most common cause of endometritis in the horse, worldwide. ----------[5]
    A) Give a reason for the above statement [1]
    B) List four (4) conditions are potentially present in a mare being infected by these bacteria? [4]

13) Describe the two possible pathogeneses for the development of a pyometra in a cow during:
    A) late post-partum. ----------[8]
    B) Early pregnancy. ----------[3]

14) During a yearly herd visit to a client for pregnancy testing you experienced the following; low % pregnant, many pregnancies of younger than expected gestational stage and few cows with involuting uteri following abortion. ----------[16]
    A) Name two possible infectious diseases [2]
    B) Describe your diagnostic plan to rule in/out the above infectious causes. [15]

15) A mare is presented to you for pregnancy termination after the owner found that he could not fasten the belly belt of the saddle any more. Describe two possible treatment options to induce abortion. ---------- [7]

16) A mare in oestrus, 9 days after being covered by a stallion is presented to you for examination during a routine visit to a stud farm. ----------[13]
    A) What is the normal dioestrus length in a healthy mare [1]
    B) Give the most likely reason for this duration of dioestrus length for this mare [1]
    C) Which diagnostic procedures can be used to confirm the diagnosis [4]
    D) Give a short overview on the likely treatment for this scenario. [7]

17) You are called out to the dystocia below. Describe the complete procedures since making contact with the mare until the dystocia is resolved. ----------[16]



18) A farmer that is practising artificial insemination (AI) on his beef herd by way of direct oestrus observation, approach you to assist him with a simple synchronizing program to suit his style of farming, with the lowest possible financial implications. ----------[9]
    A) Which synchronization system would you recommend?
    B) Describe 3 possible manipulation strategies, with insemination times, that is within the farmers capability. [8]

19) You are about to start an embryo program on the cows of a new client. You have the opportunity to choose between two genetically superior cows to flush first. Describe the characteristics to select that will help to make a good impression by flushing a fair amount of good quality embryos on your first attempt. ----------[12]
Any 12 of the following

20) In order to synchronize farrowing in a number of sows one must synchronize the foregoing oestrus. ----------[6]

A) Explain the actions taken to synchronize this oestrus [4]
B) When do you expect oestrus to occur after these actions [1]
C) What other outcomes can be expected [1]

21) By using trans-abdominal ultrasound for pregnancy examination in sheep, when is the
A) optimum time to diagnose pregnancy and
B) the best time to determine foetal numbers, in days from ovulation ----------[2]