

Describe livestock reproductive processes and practices (dairy)



Assessment Task

Learner Name	
School	
Declaration / Signature	I declare that this work is my own:

Result	Standard Achieved / Further evidence required	
Questions to revisit		
Assessor's name	Horticulture & Agriculture Teachers Association	
Assessor's signature		Date
Assessor Comments (if required)		
Re-assessment date		
Result	Standard Achieved / Further evidence required	
Assessor's signature		Date

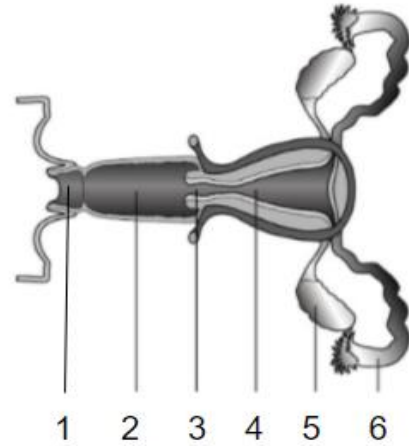
Instructions

- This is an open book assessment, and all answers must be in your own words- no copying word for word from a resource
- Complete the student box on the front page
- If you have a reader/ writer that person must also sign the cover page
- All questions must be answered in the spaces provided if you need more paper use refill.

Question One: The structure and functions of the female reproductive system (PC1.1)

Complete the table below, by labeling the diagram of a cow's reproductive system using the following terms, and describe their function:

ovary, vagina, fallopian tube, cervix, uterus horns, vulva



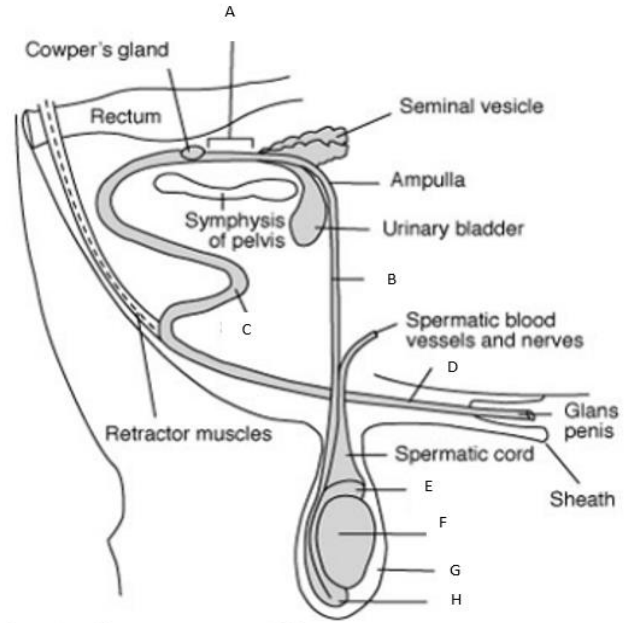
Part's name	Function(s)
1	
2	
3	
4	
5	
6	

Question Two: Structure and function of the male reproductive system (PC1.1)

Complete the table below labelling the bull's reproductive system using the following terms and describe their function.

testes, sigmoid flexure, prostate gland, scrotum, penis, head of epididymis, tail of epididymis, vas deferens

REPRODUCTIVE TRACT OF THE BULL



Part's name	Function(s)
A	
B	
C	
D	
E+H	
F	
G	

Question Three: Development of the reproductive systems (PC1.1)

The development of the reproductive organs occurs at different times in both males and females. While both the testes and ovaries are present at birth neither are mature enough to function properly until puberty has occurred. Describe the changes during puberty for both bulls and cows.

Bull	
Age at puberty	
Physical changes	
Behavioural changes	
Hormone produced	
Heifer	
Critical % of mature body weight for puberty	
Physical signs	

Question Four: Reproductive terms in dairy farming (PC1.2)

a) Describe the following dairying reproductive terms stating what each is, how it is calculated and why each one is important?

Term	Definition / meaning and how they are calculated	Why is it important?	Industry % aim
3-week SR			
6-week ICR			
CR			
NICR			

b) Define calving percentage.

c) Give a reason why calving percentage is normally lower than the calculated CR.

Question Five: Female Reproduction Cycle (PC1.3)

a) Describe the following stages in the oestrus cycle.

i) ovulation

ii) anoestrus

iii) conception

iv) oestrus

v) mating

vi) parturition

b) Name the critical hormone that is produced at each of the following stages.

Stage	Hormone
Pregnancy	
Oestrus	
Ovulation	

c) The timing of mating is critical when using artificial insemination (AI). Describe the timing of when you should inseminate a cow on heat and the importance of this to ovulation. In your answer you must state when ovulation happens.

d) Draw a flow diagram below starting with parturition and place the following female reproductive stages in the correct order. You must also state the timing of each stage.

ovulation, anoestrus, conception/pregnancy, oestrus, mating

- e) Calculate the expected calving dates for the following cows assuming February has 28 days.

Cow 182 mated October 15th	
Cow 72 mated November 10th	
Cow 478 mated December 1st	

Question Six: Achieving optimum conception rates (PC1.4)

- a) All dairy farmers want to have a concentrated calving pattern. What does this mean and why is it important to try and achieve this?

- b) Complete the following table to describe how feeding and three other factors can impact on conception rates.

Factor	Impact on conception rates
Feed levels	

Question Six: Reproductive Efficiency (PC1.5)

Dairy farmers have a range of management practices that they can use to maximise reproductive efficiency. Complete the following table for four of these practices giving an advantage and a disadvantage when using each one on a dairy farm.

Heat detection aids	
One example	
Advantage	
Disadvantage	
Oestrus synchronisation	
What this involves	
Advantage	
Disadvantage	
Drying off cows early	
What this involves	
Advantage	
Disadvantage	
Artificial insemination	
What this involves	
Advantage	
Disadvantage	