

**Q1/ Enumerate the following: (chose two only) 10M**

- 1- Factors effect on the pubertal age.
- 2- Five cases of infertility in cattle.
- 3- Non-infectious causes of abortion.

**Q2 / Write about the following: (chose two) 10M.**

- 1- Role of anterior loop of pituitary gland in estrus cycle of cow.
- 2- Main event which occur in the met-estrus stage in cattle.
- 3- Hormonal control of seasonality in mare.

**Q3/ Complete the following table: 20 M.**

	Site of secretion	Target organ	Chemical structure	Main function
PGF2				
GnRH				
Inhibin				
Estrogen				
oxytocin				

**Q4 / Explain the following: 10M.**

- 1- In ruminants the ovulation can occur at any place of ovarian surface.
- 2- When the embryo is dead after day 18<sup>th</sup> of pregnancy the length of estrus cycle is elongated more than 21 days.

**Q5/ Define following: (chose 5) 20 M.**

- 1- Mono-estrus
- 2- Luteonization
- 3- countercurrent mechanism
- 4- freemartin
- 5- Repeat Breeders
- 6- eCG

**Q 6/ How can you treated the following: (10M) 1- Pyometra 2- Follicular cyst**

**Q7/ Full the following table: 20M**

animals	Type of estrus	Estrus duration	Time of ovulation	Gestation period
Cows				
Mares				
Ewes				
Camel				
queen				

Good Luck

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