

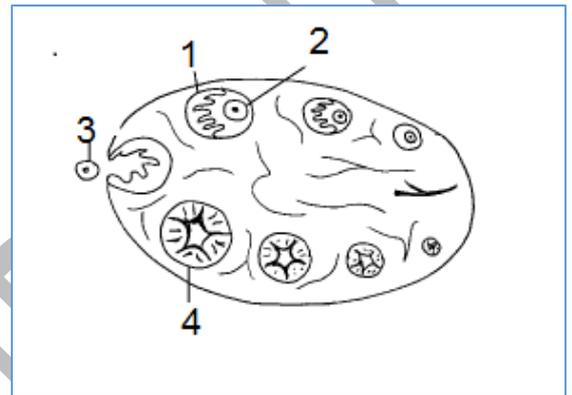
2- Draw a complete labeled diagram showing the male gametes in man

4th question:

(a) To what extent are the following statements right? Explain your answer?

- 1- Relaxation of the muscle needs energy
- 2- All hormones are proteinic substances
- 3- Number of types of t-RNA equals the number of amino acids
- 4- The secretion of progesterone hormone increases in pregnant women with dizygotic twins more than women pregnant with monozygotic twins

(b) The next figure explains a diagram of a section in the ovary of an adult female in different stages. In light of this, answer the following:



- 1- Write the name of the hormone responsible for the formation of number (1) and (4)
- 2- How many chromosomal groups are in the cell number (3)? and why?
- 3- Draw a diagram showing the thickness of the endometrium during the growth of number (1) and during the formation of number (4)

(c) Answer the following:

1- Write short notes about:

- a) The reproductive capacities among organisms
- b) Tyloses

2- The concepts of replication differ from the concept of transcription

5th question:

(a) Compare each two of the following:

- 1- Antheridia and anther (from the place and the importance)
- 2- The genome in prokaryotic and eukaryotic
- 3- The 1st vertebrae and the last vertebrae of the vertebral column (from place and size)

(b) What will happen in these cases:

- 1- Absence of beta cells from Langerhans islets
- 2- Inability of activated TH to secrete cytokines
- 3- The large ribosomal subunit cannot bind with the small ribosomal subunit during protein synthesis
- 4- Presence of two testes in the abdominal cavity in an adult male

(c) Mention the role of the following:

- 1- releasing factor
- 2- phenols
- 3- thymosin
- 4- petals
- 5- lymphatic toxins