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Assignment

1. Ovulation is the release of secondary oocyte from the ovarian follicle. It is triggered by a surge of LH production. The ovarian follicle around the middle of the ovarian cycle undergoes a sudden growth spurt producing a cystic swelling or bulge on the surface of the ovary. A small avascular spot, the stigma soon appears on this swelling. The LH surge appears to cause the stigma to balloon out forming a vesicle. The stigma soon ruptures expelling the secondary oocyte with the follicular fluid. The expelled secondary oocyte is surrounded by the zona pellucida and one or more layers of follicular cells which are radially arranged as the corona radiate.

2.

Meiosis 1	Meiosis 2
Synapsis occur	Synapsis is absent
Crossing over occurs	Crossing over is absent
Alignment of 46 duplicated chromosomes	Alignment of 23 duplicated chromosomes

Separation of 46 duplicated chromosomes	Separation of 23 duplicated chromosomes
Formation of two secondary gametocytes	Formation of four gametes

3. a. passage of sperm through the corona radiate: only capacitated sperms pass through the corona radiate.
- b. Penetration of the zona pellucida: the formation of a pathway results from the action of enzymes released from the acrosome. The enzymes cause lysis of the zona pellucida thereby forming a path for the sperm to enter the oocyte.
- c. fusion of cell membranes of the oocyte and sperm: the cell membranes of the oocyte and sperm fuse and break down in the area of fusion. The head and tail of the sperm enter the cytoplasm of the oocyte.
- d. completion of the second meiotic division of the oocyte and formation of the female pronucleus: penetration of the oocyte by a sperm activates the oocyte into completing the second meiotic division and forming a mature oocyte and a second polar body.
- e. formation of the male pronucleus: within the cytoplasm of the oocyte the nucleus of the sperm enlarges to form the male pronucleus and the tail of the sperm degenerates.

Monozygotic twins	Dizygotic twins
The have the same sex	They have different sexes

They look alike	They do not look alike
They share the same amniotic sac	Amniotic sac are separate
They share the same placenta	Placentas are different
they share the same chorionic sac	Chorionic sacs are different