

ITOKO TOKONI FERDINAND

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MBBS

ASSIGNMENT

1. **Ovulation** is the release of an egg from one of a woman's ovaries. After the egg is released, it travels down the fallopian tube, where fertilization by a sperm cell may occur. **Ovulation** typically lasts one day and occurs in the middle of a woman's menstrual cycle, about two weeks before she expects to get her period.

2. In **meiosis I**, homologous chromosomes separate, while in **meiosis II**, sister chromatids separate. **Meiosis II** produces 4 haploid daughter cells, whereas **meiosis I** produces 2 diploid daughter cells. Genetic recombination (crossing over) only occurs in **meiosis I**.

3. Zygotic stage: The zygote is formed when the male gamete (sperm) and female gamete (egg) fuse.

Blastocyst stage: The single-celled zygote begins to divide into a solid ball of cells. Then, it becomes a hollow ball of cells called a blastocyst, attaching to the lining of the mother's uterus.

Embryonic stage: The major internal organs and external features begin to emerge, forming an embryo. In this stage, the heart, brain, and spinal cord become visible. Arms and legs start to develop.

Fetal stage: Once the formed features of the embryo begin to grow and develop, the organism is considered a fetus. Differentiation and specialization of structures happens during this time.

4. **Monozygotic twins** originate from a single zygote or fertilized egg. ... Most **monozygotic twins** share one placenta and amniotic sac, this occurs when the original zygote divides about seven to twelve days into pregnancy. **Dizygotic twins** originate from two zygotes or fertilized eggs. And they are called fraternal **twins**.