NAME: IMASUEN ISOWAMWEN

MAT NO: 18/MHS01/184

COURS: EMBRYOLOGY

DEPARRMENT: MEDICINE AND SURGERY

COLLEGE : MHS

1. **Ovulation** is the release of eggs from the ovaries. In women, this event occurs when the ovarian follicles rupture and release the secondary oocyte ovarian cells. After ovulation, during the luteal phase, the egg will be available to be fertilized by sperm. In addition, the uterine lining (endometrium) is thickened to be able to receive a fertilized egg. If no conception occurs, the uterine lining as well as blood will be shed during menstruation.
2. **Difference between meiosisI and meiosisII**
   I. In meiosis I, homologous chromosomes separate, while in meiosis II, sister chromatids separate.
   II. Meiosis II produces 4 haploid daughter cells, whereas Meiosis I produces 2 diploid daughter cells.
   III. Genetic recombination (crossing over) only occurs in meiosis I
3. **Stages involved in fertilization**
   Fertilization is the process in which haploid gametes fuse to form a diploid cell called a zygote. To ensure that each zygote has the correct number of chromosomes, only one sperm can fuse with one egg.

1. **Zygotic stage**: The **zygote** is formed when the male gamete (sperm) and female gamete (egg) fuse.
2. **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.
3. **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.
4. **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. **Difference between momozygotic and dizygotic twins**
   1. Twins are two offspring produced by the same pregnancy. Twins can be either monozygotic ("identical"), meaning that they develop from one zygote, which splits and

- forms two embryos, or dizygotic ("fraternal"), meaning that each twin develops from a separate egg and each egg is fertilized by its own sperm cell.Because fraternal, or dizygotic, twins are 2 separate fertilized eggs, they usually develop 2 separate amniotic sacs, placentas, and supporting structures. Identical, or monozygotic, twins may or may not share the same amniotic sac, depending on how early the single fertilized egg divides into

  2. Monozygotic twins have exactly identical DNA while dizygotic twins do not have identical DNA.