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. But the timing of the process varies for each woman, and it may even vary from month to month.

2.      **Differences between Meiosis I and Meiosis II:**

|  |  |
| --- | --- |
| **Meiosis I** | **Meiosis II** |
| 1. Reductional division | 1. Equational division |
| 2. Number of chromosomes is reduced to half | 2. Number of chromosomes remains same |

3. 1. Preparation: Capacitation and acrosome reaction. Acrosomal vesicle fusion is the membrane fusion event of this stage. 2. Binding: Species-specific interaction of gametes. 3. Fusion: Merging of sperm and egg plasma membranes is the membrane fusion event of this stage. 4. Activation (of the zygote): Cortical reaction (fusion of cortical vesicles with the egg plasma membrane) and pronuclear fusion.

4. The **difference between monozygotic** and **dizygotic twins** is that **in the** former the **twins** develop from the same fertilized egg while **in the** latter the **twins** develop from two **different** fertilized eggs. **Monozygotic twins** have exactly the same genetic or hereditary material. Hence, they are called identical **twins**