**Cloning**

**What exactly is Cloning?**

* The creation of an organism that is an exact copy of another

**Origin**

* Derived from the word ***“klon”*** that refers to asexual reproduction also known as vegetative reproduction

**Dolly the Sheep**

* First mammal to be cloned from an adult cell
* February 23, 1997
* Scottish scientist Ian Wilmut
* Donor cell- mammary gland of a six year old ewe

**Types of Cloning**

1. **Molecular Cloning**

* Provides greater quantities of identical cells or genes for study; each cell or molecule is identical to the others
* DNA fragments containing genes are copied and amplified in a host cell, usually a bacterium
* Led to the production of many important medicines
  + Example: Insulin(diabetes), tissue Plasminogen activator (tPA, for stroke)

1. **Cellular Cloning**

* Cells are grown in a culture in a laboratory to make copies and are derived in the body
* Result: Cell line
* Useful in the testing and sometimes the production of medicines

1. **Embryo Cloning**
2. **Blastomere Separation**

* Splitting of an embryo soon after fertilization (2-8 cells)
* Cell- Blastomere
* **Totipotency**- characteristic of a blastomere that possesses the total potential to make an entire new organism
* Important in livestock breeding

1. **Blastocyst division (twinning)**

* Embryo that has already been formed sexually is split into two identical halves
* The two parts can be transferred to the uterus
* If both halves develop, then, at most, one blastocyst gives rise to identical twins

1. **Nuclear transfer**

* Nucleus is transferred from each blastomere of a four to eight cell or later stage embryo into the cytoplasm of an egg from which the genetic material has been removed(enucleated egg)
* The nucleus of a mature but unfertilized egg being removed and replaced with a nucleus obtained from a specialized cell of an adult (or fetal) organism
* Method used to clone Dolly the Sheep

**Sexual Misconduct**

**What is Sexual Misconduct?**

* is misconduct of a sexual nature. The term may be used to condemn an act.
* In legal sense, for a person in a position of authority it includes in particular any sexual activity between him or her and one of his or her subordinates.
* Commonly includes teachers and their students, clergy and their congregants, doctors and their patients, and employers and their employees. While such activity is usually not explicitly illegal, it is often against professional ethical codes.

**Example**

* A teacher may be fired and a doctor may have his or her medical license revoked because of sexual misconduct. In addition, the person in the subordinate position may allege sexual harassment.
* **Sexual assault** includes any unwanted touching or fondling of a sexual nature that is accompanied by physical force or threat of bodily injury.
* Sexual misconduct may also include other serious or persistent unwanted sexual contact or conduct, such as harassment, threats, intimidations, or unwanted touching or fondling.
* Being intoxicated does not diminish a student’s responsibility in perpetrating rape, sexual assault, or other sexual misconduct.

**Definition of Terms**

* Sexual Harassment**-** is one or a series of incidents involving unwelcome sexual advances, requests for sexual favors or verbal or physical conduct of sexual nature.

**Forms of Sexual Harassment**

* Physical contact or malicious touching
* Overt sexual advances
* Unwelcome, improper, or any unnecessary gestures of a sexual nature.

**Penalties**

**Light offenses:**

* Reprimand or fine or suspension not exceeding ten days
* Fine or suspension not exceeding 20 days
* Fine or suspension not exceeding 30 days at the discretion of the disciplining authority

**Grave Offenses:**

* Transfer or demotion in rank or salary from two to three grades
* Suspension for 1 year
* Dismissal at the discretion of the disciplining authority.