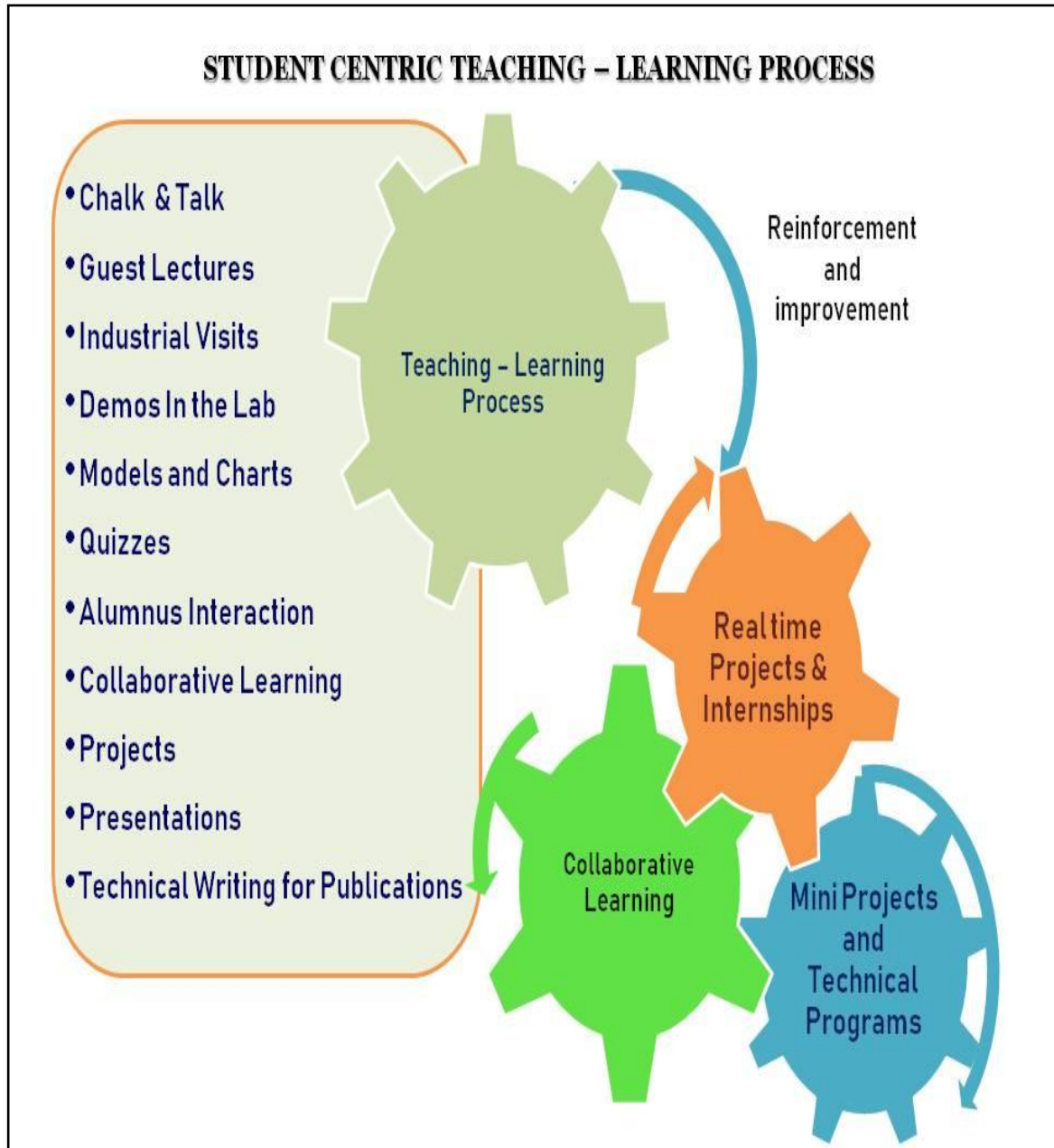




## DEPARTMENT OF BIOTECHNOLOGY

### Innovative Teaching & Learning Methodology



**Process flow on Innovation by Faculty in Teaching Learning Process**



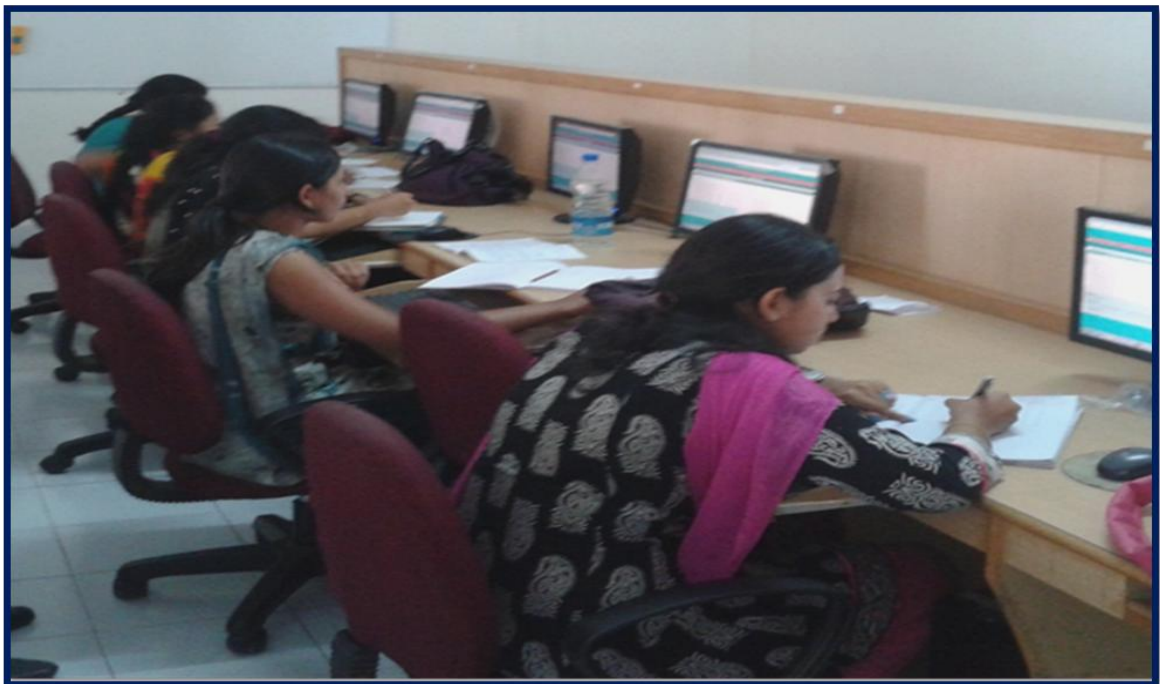
*A special talk on "Next Generation Sequencing" held on 17<sup>th</sup> March 2017*



*Role-play of DNA Replication was conducted by 4<sup>th</sup> semester students on 15<sup>th</sup> Feb 2016*



**The special lecture was delivered on the topic “Immunosuppressant” on 14<sup>th</sup> May 2016**



**Implementation of e-Resource**



**Application of Instructional methodology by students on DNA Isolation**

**QUIZ NUMBER: 01**  
**CELL BIOLOGY AND GENETICS- 15BTL35**  
**STAFF Prof. RAKESH N R**

**A. Matching**

**1. Cell junction type**

\_\_\_ Gap junction and the cytoskeleton

\_\_\_ Tight junction cytoskeleton of adjacent cells

\_\_\_ Desmosome between adjacent cells

\_\_\_ Adheren junction to proteoglycans of the ECM

\_\_\_ Hemidesmosome within a membrane

adjacent cells

**Function**

A. site of linkage between the ECM

B. site of linkage between the

C. a large aqueous channel

D. couple phospholipids

E. form a diffusion barrier

F. link intermediate filaments of

**2. Molecule**

\_\_\_ Proteoglycan and binding.

\_\_\_ Cadherin link ECM to cytoskeleton

\_\_\_ Collagen core peptide

\_\_\_ Integrin bind to tight junctions

major component of ECM

**Property**

A. mediate cell-to-cell recognition

B. transmembrane proteins that

C. consists of a GAG linked to a

D. lie inside the cell membrane and

E. filamentous protein that is

**3. Identify in this figure the regions that correspond to the**

1. Plant cell
2. Primary cell wall,
3. Secondary cell wall,
4. Middle lamella, and
5. Cell membrane.



**B.**

1. Which of the following statements correctly describes gap junctions and plasmodesmata?

- A. They both are present in animal cells.
- B. These linkages connect the cytoskeletons of adjacent cells.
- C. They facilitate the movement of cells over connective tissue.
- D. They are large pores linking adjacent cells.

2. The structure of a collagen fiber is most similar to

- A. intermediate filaments
- B. myosin thick filaments
- C. actin filaments
- D. microtubules

3. Self-renewal of tissues is possible due to the action of:

- A. replication of fibroblasts
- B. migration of new cells into the tissue
- C. creation of new extracellular matrix
- D. division of stem cells

4. In the process called actin treadmilling:

- A. myosin proteins cause movement of actin filaments.
- B. actin filaments of muscle cells contract.
- C. subunits are added to the + end with the - end anchored to the membrane.
- D. subunits are simultaneously added and removed from a filament.

5. During interphase of the cell cycle \_\_\_.

- A. DNA recombines
- B. Sister chromatids move to opposite poles
- C. The nuclear membrane disappears
- D. RNA replicates
- E. DNA content essentially doubles

6. Which of the following processes occurs in meiosis but not mitosis?

- A. Cell division
- B. Separation of homologous chromosomes to opposite poles
- C. Chromatic formation
- D. Chromosome condensation (shortening)