### References

- 1. Pelczar Jr, M.J. Chan, E.C.S. and Kreig, N.R. (1993). Microbiology, Mc. Graw Hill.Inc. New
- 2. Principles of Gene Manipulations; 6th Edn. S.B. Primrose, R.M. Twyman, and R.W. Old, Blackwell Science (2012).

# BCP 507: CELL BIOLOGY: SOFT CORE

## Practical: 8 hours/week

**Total Credits: 03** 

### Course objectives:

- Mounting of polytene chromosomes and also Barr bodies.
- · Isolation of nucleus, mitochondria, chloroplast and their purification
- Study of mitosis and meiosis.

### **EXPERIMENTS**

- 1. Mounting of polytene chromosomes
- 2. Mounting of Barr bodies
- 3. Study of mitosis by using onion root tips
- 4. Study of meiosis
- 5. Isolation of nucleus and determination of its purity
- 6. Isolation of mitochondria and determination of purity
- 7. Isolation of chloroplast by sucrose density gradient and determination of its purity
- 8. Visit to Industry/Institution/Clinical Laboratory.

#### Course outcome:

- Polytene chromosomes and Barr bodies are mounted and identified.
- Cell organelles and cell divisions are observed

#### REFERENCES:

- 1. Principles and Techniques of Biochemistry and Molecular Biology; 7th Edn. Keith Wilson and John Walker (2012).
- 2. Molecular Cell Biology, Lodish, Berk et al., 1996.