BIOCHEMISTRY (BS-ADP 8th Semester)

Module Code: **Chem-481**
Module Title: **Bio Chemistry Lab - II**
Name of Scheme: **BS-ADP 8th Semester**
Department: **School of Chemistry**
Faculty: **Science**
Module Type: **Compulsory**
Module Rating: **1 credit**

OBJECTIVES

This course will help students to understand practical grounds to isolate DNA from animal and bacterial sources. It will also help students to understand the technique of gel electrophoresis.

SYLLABUS OUTLINES

- Preparation of stock and working solution for the isolation of DNA.
- Isolation of genomic DNA by inorganic method.
- Isolation of genomic DNA by organic method.
- Determination of messenger RNA expression of candidate gene by PCR.
- Determination of DNA, cDNA by gel electrophoresis.
- Separation of different spliced DNA by gel electrophoresis.
- Isolation and estimation of DNA from animal sources and bacteria.
- Restriction enzyme digestion of DNA and its separation by gel electrophoresis

RECOMMENDED BOOKS

1. Ausubel FM, 2005. Short Protocols in Molecular Biology (2 volume set). 5thEdition; John Wiley and Son. 2. Green MR and Sambrook J, 2001.
2. Molecular Cloning: A Laboratory Manual. 3rd Edition; Cold Spring Harbor Laboratory Press. 3. Primrose SB and Twyman R, 2006.
3. Principles of Gene Manipulation and Genomics. 7th Edition; Wiley-Blackwell. 4. Wilson K and Walker J, 2010.
4. Principles and Techniques of Biochemistry and Molecular Biology. 7th Edition; Cambridge University Press. 5. Walker JM and Rapley, 2008.