

**Kanya Maha Vidyalaya, Jalandhar (Autonomous)**

**SCHEME AND CURRICULUM OF EXAMINATIONS OF TWO-YEAR DEGREE  
PROGRAMME**

**(Under Credit Based Continuous Evaluation Grading System) (CBCEGS)**

**Scheme for Master of Science (Chemistry)**

**Session 2023-24**

Master of Science (Chemistry)										
Semester-II										
Course Code	Course Name	Course Type	Hours Per Week	Credits	Total Credits	Marks				Examination time (in hours)
						Ext.		CA	Total	
				L-T-P		L	P			
MCHL-2056	Biology for Chemists	C	2	2-0-0	2	40	-	10	50	3

**M. Sc. Chemistry (Semester-II) (Session-2023-24)**

**BIOLOGY FOR CHEMISTS**

**COURSE CODE: MCHL-2056**

**(For Non-Medical Students)**

**(Theory)**

### **Course Outcomes**

After passing this course the student will be able to:

- CO1 Gain knowledge about the biomolecules and cell structure.
- CO2 Understand different types of tissues.
- CO3 Understand Mendelian laws, structure of DNA and gene expression.
- CO4 Understand Whittaker's system of classification and structure of virus.

**M. Sc. Chemistry (Semester-II) (Session-2023-24)**

**BIOLOGY FOR CHEMISTS**

**COURSE CODE: MCHL-2056**

**(For Non-Medical Students)**

**(Theory)**

**Time: 3 Hrs.**

**Max. Marks: 50**

**(Theory: 40, CA: 10)**

**Note: The students are allowed to use Non-Programmable Calculator.**

**Instructions for the Paper Setter**

Eight questions of equal marks (8 marks each) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

**UNIT-I**

**The Organization of Life**

Biologically important molecules: Carbohydrates, lipids, proteins and nucleic acids.

The life of cells – The cell theory, general characteristics of cells, difference between prokaryotic and eukaryotic cells, difference between plant and animal cells, cell organelles.

**UNIT-II**

Tissues, organs and organ systems: Animal tissues; epithelial tissues, connective tissues, muscle tissue, nervous tissue and neoplasias; plant tissue: meristematic tissue, permanent tissues.

**UNIT-III**

**Genetics**

The basic principle of heredity: Mendals law, monohybrid cross, dihybrid cross.

DNA – Double helix structure and replication.

Genes expression: Transcription and translation, genetic code.

#### **UNIT-IV**

##### **The Diversity of Life**

The classification of Living things – Criteria of classification, Whittaker's systems of classification, their characteristics with are example of each.

Viruses, structure of Viruses.

##### **Book Recommended:**

1. Cord Biology - South Western Educational Publications, Texas, 200