SUBJECT: BIOLOGY (9700)
GRADE: 11

Term 1

1. Cell structure

2. Biological molecules

3. Enzymes

4. Cell membranes and transport

5. The mitotic cell cycle

SUBJECT (Chemistry)
GRADE (11)

Term 1

Physical chemistry
1 Atomic structure
- Particles in the atom and atomic radius
- Isotopes
- Electrons, energy levels and atomic orbitals
- Ionisation energy

2 Atoms, molecules and stoichiometry
- Relative masses of atoms and molecules
- The mole and the Avogadro constant
- Formulae
- Reacting masses and volumes (of solutions and gases)

3 Chemical bonding
- Electronegativity and bonding
- Ionic bonding
- Metallic bonding
- Covalent bonding and coordinate (dative covalent) bonding
- Shapes of molecules
- Intermolecular forces, electronegativity and bond properties
- Dot-and-cross diagrams

4 States of matter
- The gaseous state: ideal and real gases and $pV = Nrt$
- Bonding and structure

5 Chemical energetics
- Enthalpy change, ΔH
- Hess's Law

6 Electrochemistry
- Redox processes: electron transfer and changes in oxidation number (oxidation state)

7 Equilibria
- Chemical equilibria: reversible reactions, dynamic equilibrium
- Brønsted–Lowry theory of acids and bases

SUBJECT (COMPUTER SCIENCE 9618)

GRADE (11)

Term 1

1. Information Representation

   1.1 Data Representation

   1.2 Multimedia

   1.3 Compression

2. Communication.

   2.1 Networks including the internet

3. Hardware

   3.1 Computers and their components

   3.2 Logic Gates and Logic Circuits

4. Processor Fundamentals

   4.1 Central Processing Unit (CPU) Architecture

   4.2 Assembly Language

8. Databases

   8.1 Database Concepts

   8.2 Database Management System (DBMS)

   8.3 Data Definition Language (DDL) and Data Manipulation Language (DML)

11. Programming

11.1 Programming Basics

11.2 Constructs

11.3 Structured Programming

SUBJECT Mathematics

GRADE 11

Term 1

- **Mechanics - 4.1 Forces and Equilibrium**
- **Pure 1 - 1.1 Quadratics**
- **Pure 1 - 1.2 Functions**
- **Pure 1 - 1.3 Coordinate Geometry**
- **Pure 1 - 1.4 Circular measure**
- **Pure 1 - 1.5 Trigonometry**
- **Mechanics - 4.2 Kinematics of motion in a straight line**
- **Mechanics - 4.3 Momentum**

SUBJECT: Physics
GRADE 11

Term 1

1- Physical quantities and units

2- Kinematics

3- Dynamics

4- Forces, Density and pressure

5- Work, energy & power

6-Deformation of solids

7- Waves

8- Superposition