

ST. MONTFORT'S SENIOR SECONDARY SCHOOL	
SYLLABUS OF CLASS - XI (SCIENCE : GROUP II), FOR SESSION 2022-23	
1.1	SUBJECT : ENGLISH CORE (Code: 301)
MONTHS	UNIT / TOPIC/CONTENT
JUNE, JULY, AUGUST	HORNBILL :- (Prose) The Portrait of a Lady , Discovering Tut: the Saga Continues , “We’re Not Afraid to Die... if We Can All Be Together”
	(Poetry) A Photograph , The Laburnum Top , The Voice of the Rain .
	SNAPSHOTS:-(Prose) The Summer of the Beautiful White Horse , The Address
	GRAMMAR :- Gap Filling, Transformation of Sentences/ Reordering
	COMPOSITION:- Poster, Debate, Advertisement.
	COMPREHENSION:- Unseen Passages.
Periodic Test 1 Syllabus (Portions from June to August)	
SEPTEMBER, OCTOBER, NOVEMBER	HORNBILL :- The Adventure
	(Poetry): Childhood
	SNAPSHOTS:-(Prose) Birth
	(Play): Mother's Day
	GRAMMAR :- Gap Filling, Transformation of Sentences/ Reordering
	COMPOSITION:- Speech Writing.
COMPREHENSION: Unseen Passages.	
Periodic Test 2 Syllabus (Portions from June to November)	
DECEMBER TO FEBRUARY	HORNBILL :- (Prose) Silk Road Father To Son
	SNAPSHOTS:- The Tale of Melon city.
	GRAMMAR :- Gap Filling, Transformation of Sentences/ Reordering
	COMPOSITION:- Poster, Debate, Advertisement,Speech Writing.
	COMPREHENSION: Unseen Passages
	REVISION
Annual Examination Syllabus (Portions June to February)	
2.1	SUBJECT : PHYSICS (Code: 042) THEORY
MONTHS	UNIT / TOPIC/CONTENT
JUNE, JULY, AUGUST	1.PHYSICAL WORLD & MEASUREMENT
	2.KINEMATICS(MOTION IN STRAIGHT LINE,MOTION IN A PLANE)
	3.LAW OF MOTION
	4.WORK,POWER,ENERGY
Periodic Test 1 Syllabus (Portions from June to August)	
SEPTEMBER, OCTOBER, NOVEMBER	5.MOTION OF SYSTEM OF PARTICLES & RIGID BODIES
	6.GRAVITATION
	7.PROPERTIES OF BULK MATTER
	i.MECHANICAL PROPERTIES OF SOLID
	ii.MECHANICAL PROPERTIES OF FLUID
iii.THERMAL PROPERTIES OF MATTER	
Periodic Test 2 Syllabus (Portions from June to November)	
DECEMBER TO FEBRUARY	8.THERMODYNAMICS
	9.BEHAVIOUR OF PERFECT GASSES AND KINETIC THEORY OF GASES
	10.OSCILLATION AND WAVES
Annual Examination Syllabus (Portions June to February)	
2.1	SUBJECT : PHYSICS (Code: 042) PRACTICAL
MONTHS	UNIT / TOPIC/CONTENT

JUNE, JULY, AUGUST	1.TO MEASURE THE DIAMETER OF A SMALL SPHEREICAL BODY AND DEPTH OF CYLINDRICAL BODY AND FIND IT'S VOLUME USING VERNIER CALLIPERS
	2.TO MEASURE THE RADIUS OF AND THICKNESS OF A GIVEN SHEET USING SCREW GAUGE
	3.TO DETERMINE THE VOLUME OF AN IRREGULAR LAMINA USING SPHEREOMETER
Periodic Test 1 Syllabus (Portions from June to August)	
SEPTEMBER, OCTOBER, NOVEMBER	5. TO STUDY THE THE RELATIONSHIP BETWEEN FORCE OF LIMITING FRICTION AND NORMAL REACTION AND TO FIND THE COEFFICIENT OF FRICTION
	6.TO DETERMINE THE YOUNG'S MODULUS OF ELASTICITY OF THE MATERIAL OF A GIVEN WIRE
	7.TO STUDY THE VARIATION IN VOLUME AND PRESSURE FOR SIMPLE AIR AT CONSTANT TEMPERATURE BY PLOTTING GRAPHS P-V AND P-1/V
	8.TO STUDY THE RELATION BETWEEN FREQUENCY AND LENGTH OF A GIVEN WIRE AND TENSION USING SONOMETER
Periodic Test 2 Syllabus (Portions from June to November)	
DECEMBER TO FEBRUARY	9.TO DETERMINE THE SURFACE TENSION OF WATER USING CAPILLARY RISE METHOD
	10.TO FIND THE SPEED OF SOUND USING RESONANCE TUBE IN TWO RESONANCE POSITIONS
Annual Examination Syllabus (Portions June to February)	
3.1	SUBJECT : CHEMISTRY (Code: 043) THEORY
MONTHS	UNIT / TOPIC/CONTENT
JUNE, JULY, AUGUST	Ch-1, Some Basic Concepts of Chemistry
	Ch-2, Structure of Atom
	Ch-3, Classification of Elements and Periodicity in Properties
	Ch-4, Chemical Bonding and Molecular Structure
Periodic Test 1 Syllabus (Portions from June to August)	
SEPTEMBER, OCTOBER, NOVEMBER	Ch-4 Chemical Bonding and Molecular Structure (Contd.)
	Ch-6, Equilibrium
	Ch-8, Organic Chemistry- some basic principles and techniques
	Ch-9, Hydrocarbons
Periodic Test 2 Syllabus (Portions from June to November)	
DECEMBER TO FEBRUARY	Ch-9 Hydrocarbons (Contd.)
	Ch-5, Thermodynamics
	Ch-7, Redox Reactions
Annual Examination Syllabus (Portions June to February)	
3.2	SUBJECT : CHEMISTRY (Code: 043) PRACTICAL
MONTHS	UNIT / TOPIC/CONTENT
	QUANTITATIVE ESTIMATION :-
	(1) Preparation of standard solution of Oxalic Acid.
	(2) Determination of the strength of a given solution of Sodium Hydroxide by titrating it against standard solution of Oxalic Acid.
	(3) Preparation of standard solution of Sodium Carbonate.

JUNE, JULY, AUGUST	(4) Determination of the strength of a given solution of Hydrochloric Acid by titrating it against standard solution of Sodium Carbonate.
	EXPERIMENTS BASED ON pH:
	(1) Determination of the pH of some solutions obtained from fruit juices, solution of known and varied concentration of acids, bases and salts using pH paper or universal indicator.
	Periodic Test 1 Syllabus (Portions from June to August)
SEPTEMBER, OCTOBER, NOVEMBER	EXPERIMENTS BASED ON pH:-
	(2) Study the pH change by common-ion in case of weak acids and weak bases
	CHEMICAL EQUILIBRIUM:-
	(1) Study the shift in equilibrium between ferric ions and thiocyanate ions by increasing/decreasing the conc. of either of the ions.
	Characterization and Purification of Chemical Substances:-
	(1) Determination of melting point of an organic compound.
	(2) Determination of boiling point of an organic compound.
(3) Crystallization of impure sample of any one of the following: Alum, Copper Sulphate, Benzoic Acid.	
Periodic Test 2 Syllabus (Portions from June to November)	
DECEMBER TO FEBRUARY	QUANTITATIVE ANALYSIS
	(1) Determination of one cation and one anion in a given salt
	Cation: Pb_2^+, Cu_2^+, As_3^+, Al_3^+, Fe_3^+, Mn_2^+, Zn_2^+, Ca_2^+, Sr_2^+, Ba_2^+, Mg_2^+, NH_4^+
	Anion: $(CO_3)^{2-}$, S^{2-}, $(SO_3)^{2-}$, $(NO_2)^-$, Cl^-, Br^-, I^-, $(PO_4)^{3-}$, $(C_2O_4)^{2-}$, CH_3COO^-, NO_3^-
	(Note:- Insoluble salts excluded)
(2) Detection of Nitrogen, Sulphur and Chlorine in organic compounds.	
Annual Examination Syllabus (Portions June to February)	
4.1	SUBJECT : BIOLOGY (Code: 044) THEORY
MONTHS	UNIT / TOPIC/CONTENT
JUNE, JULY, AUGUST	Chapter-1: The Living World
	Chapter-2: Biological Classification
	Chapter-3: Plant Kingdom
	Chapter-5: Morphology of Flowering Plants
	Chapter-6: Anatomy of Flowering Plants
	Chapter-8: Cell-The Unit of Life
	Chapter-10: Cell Cycle and Cell Division
Periodic Test 1 Syllabus (Portions from June to August)	
SEPTEMBER, OCTOBER, NOVEMBER	Chapter-4: Animal Kingdom
	Chapter-7: Structural Organisation in Animals
	Chapter-9: Biomolecules
	Chapter-17: Breathing and Exchange of Gases
	Chapter-18: Body Fluids and Circulation
	Chapter-19: Excretory Products and their Elimination
Periodic Test 2 Syllabus (Portions from June to November)	
DECEMBER TO FEBRUARY	Chapter-13: Photosynthesis in Higher Plants
	Chapter-14: Respiration in Plants

	Chapter-15: Plant - Growth and Development
	Chapter-20: Locomotion and Movement
	Chapter-21: Neural Control and Coordination
	Chapter-22: Chemical Coordination and Integration
	REVISION
Annual Examination Syllabus (Portions June to February)	
4.2	SUBJECT : BIOLOGY (Code: 044) PRACTICAL
MONTHS	UNIT / TOPIC/CONTENT
JUNE, JULY, AUGUST	Study and description of locally available common flowering plants, from family Solanaceae (Poaceae, Asteraceae or Brassicaceae can be substituted in case of particular geographical location)
	Preparation and study of T.S. of dicot and monocot roots and stems (primary).
	Study of osmosis by potato osmometer.
	Study of plasmolysis in epidermal peels (e.g. Rhoeo/lily leaves or flashy scale leaves of onion bulb).
	Parts of a compound microscope.
	Specimens/slides/models and identification with reasons - Bacteria, Spirogyra, Rhizopus, mushroom, yeast, moss, fern, pine, one monocotyledonous plant, one dicotyledonous plant and one lichen.
	Mitosis in onion root tip cells and animals cells (grasshopper) from permanent slides.
	Different types of inflorescence (cymose and racemose).
Periodic Test 1 Syllabus (Portions from June to August)	
SEPTEMBER, OCTOBER, NOVEMBER	Test for the presence of sugar, starch, proteins and fats in suitable plant and animal materials.
	Test for presence of urea in urine.
	Test for presence of sugar in urine.
	Test for presence of albumin in urine.
	Test for presence of bile salts in urine.
	Specimens/slides/models and identification with reasons - Oscillatoria, liverwort.
	Virtual specimens/slides/models and identifying features of - Amoeba, Hydra, liverfluke, Ascaris, leech, earthworm, prawn, silkworm, honey bee, snail, starfish, shark, rohu, frog, lizard, pigeon and rabbit.
Periodic Test 2 Syllabus (Portions from June to November)	
DECEMBER TO FEBRUARY	Study of distribution of stomata on the upper and lower surfaces of leaves.
	Comparative study of the rates of transpiration in the upper and lower surfaces of leaves.
	Separation of plant pigments through paper chromatography.
	Study of the rate of respiration in flower buds/leaf tissue and germinating seeds.
	Human skeleton and different types of joints with the help of virtual images/models only.
Annual Examination Syllabus (Portions June to February)	
5.1	SUBJECT : MATHEMATICS (Code: 041)
MONTHS	UNIT / TOPIC/CONTENT
JUNE, JULY, AUGUST	Set
	Linear Inequalities

	Sequence and Series
	Statistics
	Probability
Periodic Test 1 Syllabus (Portions from June to August)	
SEPTEMBER, OCTOBER, NOVEMBER	Relations and Functions
	Trigonometric Functions
	Limits and Derivatives
	Complex Number and Quadratic Equation
	Introduction to Three-dimensional Geometry
Periodic Test 2 Syllabus (Portions from June to November)	
DECEMBER TO FEBRUARY	Permutations and Combinations
	Binomial Theorem
	Straight Lines
	Conic Sections
Annual Examination Syllabus (Portions June to February)	
6.1	SUBJECT : PHYSICAL EDUCATION (Code: 048)
MONTHS	UNIT / TOPIC/CONTENT
JUNE, JULY, AUGUST	Changing Trends & Career in Physical Education.
	Olympism
	Yoga
	Physical Education & Sports for (CWSN)
	Physical Fitness Test :SAI Khelo India Test, Brockport Physical Fitness Test (Practical)
Periodic Test 1 Syllabus (Portions from June to August)	
SEPTEMBER, OCTOBER, NOVEMBER	Physical Fitness, Health & Wellness
	Test, Measurement & Evaluation
	Fundamentals of Anatomy , Physiology in sports
	Fundamentals of Kinesiology and Biomechanics in Sports
	Yoga (Practical)
Periodic Test 2 Syllabus (Portions from June to November)	
DECEMBER TO FEBRUARY	Psychology & Sports
	Training and Doping in Sports
	Record File
	Viva Voce
Annual Examination Syllabus (Portions June to February)	
7.1	SUBJECT : COMPUTER SCIENCE (Code: 083) THEORY
MONTHS	UNIT / TOPIC/CONTENT
JUNE, JULY, AUGUST	Ch 1 : Basic Computer Organisation [NCERT]
	Ch 2 : Encoding Schemes and Number Systems [NCERT]
	Ch 3 : Boolean Algebra [Reema Thareja]
	Ch 4 : Introduction to Problem Solving [NCERT]
	Ch 5 : Getting Started with Python [NCERT]
Periodic Test 1 Syllabus (Portions from June to August)	
SEPTEMBER, OCTOBER, NOVEMBER	Ch 5 : Getting Started with Python [NCERT] (Contd.)
	Ch 6 : Flow of Control [NCERT]
	Ch 8 : Strings [NCERT]
Periodic Test 2 Syllabus (Portions from June to November)	

DECEMBER TO FEBRUARY	Ch 9 : Lists [NCERT]
	Ch 10 : Tuples and Dictionaries [NCERT]
	Ch 11 : Societal Impact [NCERT]
Annual Examination Syllabus (Portions June to February)	
7.2	SUBJECT : COMPUTER SCIENCE (Code: 083) PRACTICAL
MONTHS	UNIT / TOPIC/CONTENT
JUNE, JULY, AUGUST	Input a welcome message and display it.
Periodic Test 1 Syllabus (Portions from June to August)	
SEPTEMBER, OCTOBER, NOVEMBER	Input two numbers and display the larger / smaller number.
	Input three numbers and display the largest / smallest number.
	Generate the different patterns using nested loop.
	Write a program to input the value of x and n and print the sum of the different series.
	Determine whether a number is a perfect number, an armstrong number or a palindrome.
	Input a number and check if the number is a prime or composite number.
	Display the terms of a Fibonacci series.
	Compute the greatest common divisor and least common multiple of two integers
	Count and display the number of vowels, consonants, uppercase, lowercase characters in string.
Input a string and determine whether it is a palindrome or not; convert the case of characters in a string.	
Periodic Test 2 Syllabus (Portions from June to November)	
DECEMBER TO FEBRUARY	Find the largest/smallest number in a list/tuple
	Input a list of numbers and swap elements at the even location with the elements at the odd location.
	Input a list/tuple of elements, search for a given element in the list/tuple.
	Input a list of numbers and find the smallest and largest number from the list.
	Create a dictionary with the roll number, name and marks of n students in a class and display the names of students who have scored marks above 75.
Annual Examination Syllabus (Portions June to February)	
8.1	SUBJECT : INFORMATION TECHNOLOGY (Code: 082)
MONTHS	UNIT / TOPIC/CONTENT
JUNE, JULY, AUGUST	Communication skills III
	Computer organisation
	Self management skill III
	Practical file
	Networking and Internet
	ICT skills III
	Viva voce
Periodic Test 1 Syllabus (Portions from June to August)	
SEPTEMBER, OCTOBER, NOVEMBER	Office Automation tools
	RDBMS
	Green skills III
Periodic Test 2 Syllabus (Portions from June to November)	
DECEMBER TO FEBRUARY	Entrepreneurial skill III
	Fundamentals of Java
	Programs in java
Annual Examination Syllabus (Portions June to February)	