ST. THOMAS SCHOOL, LONI

SYLLABUS 2024-25

CLASS – XII A

SCIENCE

HALF YEARLY EXAMINATION

ENGLISH (301)

Prescribed Books: 1) Flamingo
2) Vistas: Supplementary Reader
Publisher- NCERT

Reading Comprehension-   1. Unseen Passage- One unseen passage to assess comprehension, interpretation and inference. Vocabulary and inference of meaning will also be assessed. The passage may be factual, descriptive or literary.   2. Unseen Passage- One unseen case-based passage with verbal/visual inputs like statistical data, charts etc.
Creative Writing Skills-   Short Writing Tasks- Formal/Informal Invitation and Reply   Notice and Letters to the editor   2. Long Writing Tasks- Report Writing
Literature- Questions based on extracts/texts to assess comprehension and appreciation, analysis, inference and extrapolation   **Book- Flamingo**   Ch.1 - The Last Lesson   Ch 2. - Lost Spring   Ch 3 - Deep Water   Ch 4. - The Rattrap   1.Poem- My Mother at Sixty-Six   2.Poem – Keeping Quiet   3.Poem - A Thing of Beauty   4.Poem – A Roadside Stand   **Book- Vistas**   Ch1. –The Third Level   Ch2- The Tiger King   Ch4.- The Enemy

Subject- Physics (042)

TEXT BOOK- PHYSICS
PUBLISHERS-NCERT **Total Chapters: 8**

Chapter-1	ELECETRIC CHRGES AND FIELDS
Chapter-2	ELECTRIC POTENTIAL AND CAPACITANCE
Chapter-3	CURRENT ELECTRICITY

Chapter-4	MOVING CHARGES AND MAGNETISM
Chapter-5	MAGNETISM AND MATTER
Chapter-6	ELECTROMAGNETIC INDUCTION
Chapter-7	ALTERNATING CURRENTS
Chapter-8	ELECTROMAGNETIC WAVES

Subject- Chemistry (043)

TEXT BOOK- CHEMISTRY
PUBLISHERS-NCERT   **Total Chapters: 5**

Chapter-2	Solutions
Chapter-3	Electrochemistry
Chapter-10	Haloalkanes and Haloarenes
Chapter-11	Alcohols, Phenols and Ethers
Chapter-14	Biomolecules

Subject-Biology (044)

TEXT BOOK- BIOLOGY
PUBLISHERS-NCERT

Chapter-2	Sexual Reproduction in Flowering Plants
Chapter-3	Human Reproduction
Chapter-4	Reproductive Health
Chapter-5	Principles of Inheritance and Variation
Chapter-6	Molecular Basis of Inheritance
Chapter-7	Evolution
Chapter-11	Biotechnology; Principles and Processes

Subject- Mathematics (041)

Main course book: N.C.E.R.T
Reference Book: R. D. SHARMA

CHAPTER NO.	CHAPTER NAME
Chapter-1	Relations and Functions
Chapter -2	Inverse Trigonometric Functions
Chapter -3	Matrices
Chapter-4	Determinants
Chapter-5	Continuity and Differentiability
Chapter -6	Application of Derivatives
Chapter -7	Integrals
Chapter -8	Application of Integrals

Subject -Physical Education (048)

TEXT BOOK- Health and Physical Education
PUBLISHERS- Lakshmi Publication
- Management of Sporting Events
- Children and Women in Sports
- Yoga as Preventive measure for Lifestyle Disease
- Physical Education and sports for CWSN
- Nutrition and sports

Subject- Carnatic Music (031)

TEXT BOOK- SOUTH INDIAN MUSIC BOOK BY SAMBAMOORTHY
PUBLISHER- INDIAN MUSIC PUBLISHING HOUSE, MADRAS

S.NO	TOPICS
1.	**BIOGRAPHIES –** ANNAMACHARYA, KSHETRAJNA, SWATI TIRUNAL, GOPAL KRISHNA BHARATI, PATNAM SUBHRAMANYA IYER, MYSORE VASUDEVACHAR, RAMNAD SRINIVASA IYENGAR, MAHA VAIDYANATH IYER
2.	**LAKSHANA GRANDHAS –** SANGITA SARAMRITA, SANGITA SAMPRADAYA PRADARSHINI, SVARAMELAKALANIDHI, RAGA VIBODHA, BRIHADSESI
3.	**MUSICAL FORMS –** KRITI, PADAM, JAVALI
4.	**RAGA CLASSIFICATION**
5.	**CLASSIFICATION OF MUSICAL INSTRUMENTS**
6.	**RAGA LAKSHANAS –** MOHANAM, PANTUVARALI, KEERAVANI, KEDARAGOULA, TODI, NATA, GOULA, SRI, SAVERI, RITIGOULA

SUBJECT – Fine Arts (Painting) (049)

Book – Panoramic Indian Painting
Publisher- Vishal Publication

Unit- 1 The Rajasthani and Pahari School of Miniature painting
Unit- 2 The Mughal and Deccan School of Miniature Painting

SUBJECT-COMPUTER SCIENCE (Code- 083)
Name of Book- Computer Science with Python
Publisher- Sultan Chand
Unit I: Computational Thinking and Programming – 2
- Revision of Python topics covered in Class XI.
- Functions: types of function (built-in functions, functions defined in module, user-defined functions), creating user defined function, arguments and parameters, default parameters, positional parameters, function returning value(s), flow of execution, scope of a variable (global scope, local scope)

- Introduction to files, types of files (Text file, Binary file, CSV file), relative and absolute paths
- Text file: opening a text file, text file open modes (r, r+, w, w+, a, a+), closing a text file, opening a file using with clause, writing/appending data to a text file using write() and writelines(), reading from a text file using read(), readline() and readlines(), seek and tell methods, manipulation of data in a text file
- Binary file: basic operations on a binary file: open using file open modes (rb, rb+, wb, wb+, ab, ab+), close a binary file, import pickle module, dump() and load() method, read, write/create, search, append and update operations in a binary file
- CSV file: import csv module, open / close csv file, write into a csv file using csv.writer() and read from a csv file using csv.reader( )

Unit II: Computer Networks
- Evolution of networking: introduction to computer networks, evolution of networking (ARPANET, NSFNET, INTERNET)
- Data communication terminologies: concept of communication, components of data communication (sender, receiver, message, communication media, protocols), measuring capacity of communication media (bandwidth, data transfer rate), IP address, switching techniques (Circuit switching, Packet switching)
- Transmission media: Wired communication media (Twisted pair cable, Co-axial cable, Fiber-optic cable), Wireless media (Radio waves, Micro waves, Infrared waves
- Network devices (Modem, Ethernet card, RJ45, Repeater, Hub, Switch, Router, Gateway, WIFI card)
- Network topologies and Network types: types of networks (PAN, LAN, MAN, WAN), networking topologies (Bus, Star, Tree)
- Network protocol: HTTP, FTP, PPP, SMTP, TCP/IP, POP3, HTTPS, TELNET, VoIP
- Introduction to web services: WWW, Hyper Text Markup Language (HTML), Extensible Markup Language (XML), domain names, URL, website, web browser, web servers, web hosting

Unit III: Database Management
- Database concepts: introduction to database concepts and their need
- Relational data model: relation, attribute, tuple, domain, degree, cardinality, keys (candidate key, primary key, alternate key, foreign key)

Structured Query Language: introduction, Data Definition Language and Data Manipulation Language, data type (char(n), varchar(n), int, float, date), constraints (not null, unique, primary key), create a database, use database, show databases, drop the database, show tables, create a table, describe the table