SHEMFORD
SENIOR SECONDARY SCHOOL HALDWANI

SYLLABUS FOR ANNUAL EXAMINATION (2021-2022)
For Grade-XI

Subject	Syllabus
ENGLISH CORE (301)	**Reading Comprehension:** Unseen passage (factual, descriptive or literary /discursive or persuasive) Unseen passage for Note Making and Summarising **8 + 5 =13** **Creative Writing Skills and Grammar:** Short Writing Tasks Posters long Writing Tasks Official Letters: e.g. to school/college authorities (regarding admissions, school issues, requirements / suitability of courses) Debate **Grammar** Determiners Tenses Re-ordering of Sentences {MCQs on Gap filling/ Transformation of Sentences}. **3 + 5 + 4 = 12** **Literature:** Questions based on extracts/texts to assess comprehension and appreciation, analysis, inference, extrapolation **Book-Hornbill:** The Voice of the Rain (Poem) The Ailing Planet: The Green Movement's Role (Prose) The Browning Version (Play) Childhood (Poem) Silk Road (Prose) **Book-Snapshots:** Albert Einstein at School (Prose) Mother's Day (Play) Birth (Prose). **9 marks for hornbill + 6 marks for snapshots = 15 marks**
HINDI CORE (302)	1. याद घर की याद 2. दुष्यंत कुमार की गजल 3. आओ मिलकर बचाएं 4. स्पीति में बारिश 5. जामुन का पेड़ 6. राजस्थान की रजत बूंदें 7. आलो आंधारि 8. कार्यालयी लेखन और प्रक्रिया 9. जनसंचार माध्यम 10. पत्रकारिता के विविध आयाम 11. रोजगार संबंधी आवेदन पत्र
MATHEMATICS (041)	1. Trigonometric functions 2. Linear inequalities 3. Permutation and combinations 4. Conic sections 5. Introduction to three-dimensional geometry

	6. Derivatives 7. Probability
PHYSICS (042)	1. Mechanical properties of solids 2. Mechanical properties of fluid 3. Thermal properties of matter 4. Thermodynamic. 5. Kinetic theory of gases 6. Oscillation 7. Waves
CHEMISTRY (043)	**1.** STATES OF MATTER **2.** THERMODYNAMICS **3.** EQUILIBRIUM **4.** s-BLOCK ELEMENTS **5.** p-BLOCK ELEMENTS **6.** HYDROCARBON
BIOLOGY (044)	**Unit-III Cell: Structure and Function** Chapter-10: Cell Cycle and Cell Division Cell cycle, mitosis, meiosis and their significance **Unit-IV Plant Physiology** Chapter-13: Photosynthesis in Higher Plants Photosynthesis as a means of autotrophic nutrition; site of photosynthesis, pigments involved in photosynthesis (elementary idea); photochemical and biosynthetic phases of photosynthesis; cyclic and non-cyclic photophosphorylation; chemiosmotic hypothesis; photorespiration; C3 and C4 pathways; factors affecting photosynthesis. Chapter-14: Respiration in Plants Exchange of gases; cellular respiration - glycolysis, fermentation (anaerobic), TCA cycle and electron transport system (aerobic); energy relations - number of ATP molecules generated; amphibolic pathways; respiratory quotient. Chapter-15: Plant - Growth and Development Growth regulators - auxin, gibberellin, cytokinin, ethylene, ABA. **Unit-V Human Physiology** Chapter-17: Breathing and Exchange of Gases Respiratory organs in animals (recall only); Respiratory system in humans; mechanism of breathing and its regulation in humans - exchange of gases, transport of gases and regulation of respiration, respiratory volume; disorders related to respiration - asthma, emphysema, occupational respiratory disorders. Chapter-18: Body Fluids and Circulation Composition of blood, blood groups, coagulation of blood; composition of lymph and its function; human circulatory system - Structure of human heart and blood vessels; cardiac cycle, cardiac output, ECG; double circulation; regulation of cardiac activity; disorders of circulatory system - hypertension, coronary artery disease, angina pectoris, heart failure. Chapter-19: Excretory Products and their Elimination Modes of excretion - ammonotelism, ureotelism, uricotelism; human excretory system – structure and function; urine formation, osmoregulation; regulation of kidney function - renin - angiotensin, atrial natriuretic factor, ADH and diabetes insipidus; role of other organs in excretion; disorders - uremia, renal failure, renal calculi, nephritis; dialysis and artificial kidney, kidney transplant. Chapter-20: Locomotion and Movement Skeletal muscle, contractile proteins and muscle contraction. Chapter-21: Neural Control and Coordination Neuron and nerves; Nervous system in humans - central nervous system; peripheral nervous system and visceral nervous system; generation and conduction of nerve impulse.

	Chapter-22: Chemical Coordination and Integration Endocrine glands and hormones; human endocrine system - hypothalamus, pituitary, pineal, thyroid, parathyroid, adrenal, pancreas, gonads; mechanism of hormone action (elementary idea); role of hormones as messengers and regulators, hypo - and hyperactivity and related disorders; dwarfism, acromegaly, cretinism, goiter, exophthalmic goiter, diabetes, Addison's disease. **PRACTICAL :-** LIST OF EXPERIMENTS :- 1. Separation of plant pigments through paper chromatography. 2. Study of distribution of stomata in the upper and lower surfaces of leaves. 3. Study of the rate of respiration in flower buds/leaf tissue and germinating seeds. 4. Test for presence of sugar in urine. 5. Test for presence of albumin in urine SPOTTING:- 1.Tissues and diversity in shape and size of animal cells (squamous epithelium, smooth, skeletal and cardiac muscle fibers and mammalian blood smear) through temporary/permanent slides. 2. Mitosis in onion root tip cells and animal cells (grasshopper) from permanent slides.
COMPUTER SCIENCE (PYTHON) (083)	**Unit II: Computational Thinking and Programming – 1** ● Lists: introduction, indexing, list operations (concatenation, repetition, membership & slicing), traversing a list using loops, built-in functions: len(), list(), append(), extend(), insert(), count(), index(), remove(), pop(), reverse(), sort(), sorted(), min(), max(), sum(); nested lists, suggested programs: finding the maximum, minimum, mean of numeric values stored in a list; linear search on list of numbers and counting the frequency of elements in a list ● Tuples: introduction, indexing, tuple operations (concatenation, repetition, membership & slicing), built-in functions: len(), tuple(), count(), index(), sorted(), min(), max(), sum(); tuple assignment, nested tuple, suggested programs: finding the minimum, maximum, mean of values stored in a tuple; linear search on a tuple of numbers, counting the frequency of elements in a tuple ● Dictionary: introduction, accessing items in a dictionary using keys, mutability of dictionary (adding a new item, modifying an existing item), traversing a dictionary, built-in functions: len(), dict(), keys(), values(), items(), get(), update(), del(), clear(), fromkeys(), copy(), pop(), popitem(), setdefault(), max(), min(), count(), sorted(), copy(); suggested programs : count the number of times a character appears in a given string using a dictionary, create a dictionary with names of employees, their salary and access them ● Introduction to Python modules: Importing module using 'import <module>' and using from statement, Importing math module (pi, e, sqrt, ceil, floor, pow, fabs, sin, cos, tan); random module (random, randint, randrange), statistics module (mean, median, mode)

	Unit III: Society, Law and Ethics ● Digital Footprints ● Digital society and Netizen: net etiquettes, communication etiquettes, social media etiquettes ● Data protection: Intellectual Property Right (copyright, patent, trademark), violation of IPR (plagiarism, copyright infringement, trademark infringement), open source softwares and licensing (Creative Commons, GPL and Apache) ● Cyber-crime: definition, hacking, eavesdropping, phishing and fraud emails, ransomware, preventing cyber crime ● Cyber safety: safely browsing the web, identity protection, confidentiality, cyber trolls and bullying. ● Safely accessing web sites: malware, viruses, Trojans, adware ● E-waste management: proper disposal of used electronic gadgets ● Indian Information Technology Act (IT Act) ● Technology & Society: Gender and disability issues while teaching and using computers
GEOGRAPHY (029)	**Fundamental of Physical Geography** Ch 8- Composition and Structure of Atmosphere Ch 9- Solar Radiation, Heat Balance and Temperature Ch 10- Atmosphere Circulation and Weather System Ch 11- Water in Atmosphere Ch 14- Movements of Ocean Water Ch 16- Biodiversity and Conservation **India: Physical Environment** Ch 4- Climate Ch 5- Natural Vegetation Ch 6- Soils **Practical Work in Geography** Ch 6- Introduction to Aerial Photograph Ch 7- Introduction to Remote Sensing Ch 8- Weather Instruments, Maps and Charts
BUSINESS STUDIES (054)	Ch-7 sources of business finance Ch-8 small business and entrepreneurship Ch-9 internal trade Ch-10 international business
ACCOUNTANCY (055)	1. Accounting for bills of exchange 2. Trial balance and rectification of errors 3. Financial statements of sole proprietorship 4. Financial statement of incomplete records
ECONOMICS (030)	**Microeconomics** 1. Concept of cost 2. Concept of revenue 3. Concept of production 4. Forms of market 5. Supply and elasticity of supply **Statistics** 1. Mean deviation and standard deviations 2. Index numbers

INFORMATICS PRACTICES (PYTHON) (065)	**Database concepts and the Structured Query Language** ● Database Concepts: Introduction to database concepts and its need, Database Management System. Relational data model: concept of attribute, domain, tuple, relation, candidate key, primary Key, alternate key, foreign key. ● Structured Query Language: Data Definition Language, Data Query Language and Data Manipulation Language, Introduction to MySQL: Creating a database, using database, showing Tables using MySQL, ● Data Types: char, varchar, int, float, date. ● Data Definition Commands: CREATE, DROP, ALTER (Add and Remove primary key, attribute). Data Query Commands: SELECT-FROM- WHERE, LIKE, BETWEEN, IN, ORDER BY, using Arithmetic, logical, relational operators and NULL values in queries, Distinct clause Data Manipulation Commands: INSERT, UPDATE, DELETE. Unit 4: Introduction to the Emerging Trends ● Artificial Intelligence, Machine Learning, Natural Language Processing, ● Immersive experience (AR, VR), Robotics ● Big data and its characteristics, Internet of Things (IoT), Sensors, Smart cities, ● Cloud Computing and Cloud Services (SaaS, IaaS, PaaS); ● Grid Computing, Block chain technology.
HINDUSTANI MUSIC VOCAL (034)	**Brief study of the following:** Unit-1 Thaat, Jati, Laya Tala, Martin, Desi Unit-2 Dhrupad, Tarana Unit-3 Life Sketch and contribution of Tanse V. N. Bhatkhande, V. D. Paluskar Unit-4 Tanpura Unit-5 Raga Bhimpalasi (Raga parichay, Aroh, Avroh, Pakad, Notation, Alap, Taan's) Unit-6 Chautala Along with Thah, Dugun, Chaugun **Practical syllabus** Raga Bhimpalasi, Raga Bihag, Raga Bhairvi, Devotional song Chautala along with Thah, Dugun, Chaugun Ability to recognize the Prescribed Raga
PHYSICAL EDUCATION (048)	Unit -1 Physical education & sports for CWSN Unit -2 Yoga Unit -3 Physical activities & Leadership training Unit -4 Psychology & sports Unit- 5 Training and Doping in sports
FINANCIAL MARKETS MANAGEMENT (805)	1. Mutual funds product and features 2. ETFs, debts and liquid funds 3. Taxation and regulation