



Class XI
End Term Syllabus-SCIENCE
2024-2025

| ENGLISH | MATH | PHYSICS | CHEMISTRY | BIOLOGY |
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| <p>Reading</p> <p>1) Reading Comprehension based on Unseen Passage</p> <p>2) Note-Making and Summarisation</p> <p>Integrated Grammar and Creative Writing Skills</p> <p>Grammar-</p> <p>1) Gap filling (tenses)</p> <p>2) Rearrangement of jumbled sentences</p> <p>3) Sentence Transformation (Reported Speech and Active and Passive Voice)</p> <p>Short Writing Skills -</p> <p>1) Poster Making</p> <p>2) Classified Advertisement</p> | <p>1. Sets</p> <p>2. Relations and functions</p> <p>3. Trigonometric functions</p> <p>4. Complex numbers and Quadratic Equations</p> <p>5. Linear Inequalities</p> <p>6. Permutations and Combinations</p> <p>7. Sequence and Series</p> <p>8. Straight Lines</p> <p>9. Conic Sections</p> <p>10. Limits and Derivatives</p> <p>11. Probability</p> | <p>Unit-I Physical World and Measurement</p> <p>Unit-II Kinematics</p> <p>Unit-III Laws of Motion</p> <p>Unit-IV Work, Energy and Power</p> <p>Unit-V Motion of System of Particles and Rigid Body</p> <p>Unit-VI Gravitation</p> <p>Unit-VII Properties of Bulk Matter</p> <p>Unit-X Oscillations and Waves</p> | <p>UNIT 1: Some Basic Concepts of Chemistry</p> <p>UNIT 2: Structure of Atom</p> <p>UNIT 3: Classification of Elements and Periodicity in Properties</p> <p>UNIT 4: Chemical Bonding and Molecular Structure</p> <p>UNIT 6: Equilibrium</p> <p>UNIT 7: Redox Reactions</p> <p>UNIT 8: Organic Chemistry: Some basic Principles and Techniques</p> <p>UNIT 9: Hydrocarbons</p> | <p>1. The Living World</p> <p>2. Biological Classification</p> <p>3. Plant Kingdom</p> <p>4. Animal Kingdom</p> <p>5. Morphology of Flowering Plants</p> <p>6. Anatomy of Flowering Plants</p> <p>7. Structural Organisation in Animals</p> <p>8. Cell : The Unit of Life</p> <p>9. Biomolecules</p> <p>10. Cell Cycle and Cell Division</p> <p>11. Photosynthesis in Higher Plants</p> <p>12. Respiration in Plants</p> <p>13. Plant Growth and Development</p> <p>14. Breathing and Exchange of Gases</p> |

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| <p>Long Writing Skills -</p> <ol style="list-style-type: none"> 1) Speech Writing 2) Debate Writing <p>Literature</p> <p>Literature Reader (Hornbill)</p> <p>Prose</p> <ol style="list-style-type: none"> 1) The Portrait of a Lady 2) We are not Afraid to Die... 3) Discovering Tut: the Saga Continues 4) The Adventure 5) Silk Road <p>Poem</p> <ol style="list-style-type: none"> 1) A Photograph 2) The Laburnum Top 3) The Voice of the Rain 4) Childhood 5) Father to Son <p>Supplementary Reader</p> <ol style="list-style-type: none"> 1) Summer of the Beautiful White House 2) The Address 3) Mother's Day 4) Birth 5) Tale of the Melon City | | | | <ol style="list-style-type: none"> 15. Body Fluids and Circulation 16. Excretory Products and their Elimination 17. Locomotion and Movement 18. Neural Control and Coordination 19. Chemical Coordination and Integration |
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| <p>ECONOMICS</p> <p>Statistics for economics Chapter 1: Introduction Chapter 2 : Collection of Data Chapter 3 : Organisation of Data Chapter 4 : Presentation of Data Chapter 5 : Measures of Central Tendency Chapter 6 : Correlation Chapter 7 : Index Numbers</p> <p>Microeconomics Chapter 1: Introduction to microeconomics Chapter 2: Consumers behaviour and demand Chapter 3: Producer's behaviour and supply Chapter 4: Forms of market and price determination.</p> | <p>PSYCHOLOGY</p> <ol style="list-style-type: none"> 1. What is Psychology? 2. Methods of Enquiry in Psychology 3. Human Development 4. Sensory, Attentional and Perceptual Processes 5. Learning 6. Human Memory 7. Thinking 8. Motivation and Emotion | <p>PHYSICAL EDUCATION</p> <ol style="list-style-type: none"> 1.Changing trends & careers in physical education. 2.Olympism and physical education 3.Yoga 4.Physical education & sports for children with special needs. 5.Physical fitness, wellness & lifestyle. 6.Test measurement & evaluation. 7.Fundamentals of Anatomy, Physiology in sports. 8.Fundamentals of kinesiology & Biomechanics in sports. 9.Psychology & sports. 10.Training & doping in sports. | <p>COMPUTER SCIENCE</p> <p>Unit wise Syllabus</p> <p>Unit I: Computer Systems and Organisation</p> <ul style="list-style-type: none"> ● Basic computer organisation: Introduction to Computer System, hardware, software, input device, output device, CPU, memory (primary, cache and secondary), units of memory (bit, byte, KB, MB, GB, TB, PB) ● Types of software: System software (Operating systems, system utilities, device drivers), programming tools and language translators (assembler, compiler, and interpreter), application software ● Operating System(OS): functions of the operating system, OS user interface ● Boolean logic: NOT, AND, OR, NAND, NOR, XOR, NOT, truth tables and De Morgan's laws, Logic circuits ● Number System: Binary, Octal, Decimal and Hexadecimal number system; conversion between number systems ● Encoding Schemes: ASCII, ISCII, and Unicode (UTF8, UTF32) <p>Unit II: Computational Thinking and Programming - I</p> <ul style="list-style-type: none"> ● Introduction to Problem-solving: Steps for Problem-solving (Analyzing the problem, developing an algorithm, coding, testing, and debugging), representation of algorithms using flowchart and pseudocode, decomposition ● Familiarization with the basics of Python programming: Introduction to Python, Features of Python, executing a simple "hello world" program, execution modes: interactive mode and script |
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| | | <p>mode, Python character set, Python tokens(keyword, identifier, literal, operator, punctuator), variables, concept of l-value and r-value, use of comments</p> <ul style="list-style-type: none">• Knowledge of data types: Number(integer, floating point, complex), boolean, sequence(string, list, tuple), None, Mapping(dictionary), mutable and immutable data types.• Operators: arithmetic operators, relational operators, logical operators, assignment operators, augmented assignment operators, identity operators (is, is not), membership operators (in not in)• Expressions, statement, type conversion, and input/output: precedence of operators, expression, evaluation of an expression, type-conversion (explicit and implicit conversion), accepting data as input from the console and displaying output.• Errors- syntax errors, logical errors, and run-time errors• Flow of Control: introduction, use of indentation, sequential flow, conditional and iterative flow• Conditional statements: if, if-else, if-elif-else, flowcharts, simple programs: e.g.: absolute value, sort 3 numbers and divisibility of a number.• Iterative Statement: for loop, range(), while loop, flowcharts, break and continue statements, nested loops, suggested programs: generating pattern, summation of series, finding the factorial of a positive number, etc.• Strings: introduction, string operations (concatenation, repetition, membership and slicing), traversing a string using loops, built-in functions/methods-len(), capitalize(), title(), lower(), upper(), count(), find(), index(), endswith(), startswith(), isalnum(), isalpha(), isdigit(), islower(), isupper(), |
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| | | <p>isspace(),lstrip(),rstrip(),strip(),replace(),join(),partition(),split() • Lists: introduction, indexing, list operations (concatenation, repetition, membership and slicing), traversing a list using loops, built-in functions/methods–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 and slicing); built-in functions/methods – 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 a dictionary (adding a new term, modifying an existing item), traversing a dictionary, built-in fromkeys(), copy(), pop(), popitem(), setdefault(), max(), min(), sorted(); 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' and using from statement, importing math module (pi, e, sqrt(), ceil(), floor(), pow(), fabs(), sin(), cos(), tan()); random module</p> |
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| | | | <p>(random(), randint(), randrange()), statistics module (mean(), median(), mode()).</p> <p>Unit III: Society, Law and Ethics</p> <ul style="list-style-type: none">• Digital Footprints• Digital Society and Netizen: net etiquettes, communication etiquettes, social media etiquettes• Data Protection: Intellectual property rights (copyright, patent , trademark), violation of IPR(plagiarism, copyright infringement, trademark infringement), open source software and licensing (Creative Commons, GPL and Apache)• Cyber Crime: definition, hacking, eavesdropping, phishing and fraud emails, ransomware, cyber trolls, cyber bullying• Cyber safety: safely browsing the web, identity protection, confidentiality• Malware: viruses, trojans, adware• E-waste management: proper disposal of used electronic gadgets.• Information Technology Act (IT Act)• Technology and society: Gender and disability issues while teaching and using computers |
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