



**LIONS PUBLIC SCHOOL**  
**I BLOCK PHASE- 1 ASHOK VIHAR**  
**DELHI: 110052**  
**(SESSION: 2024-2025)**

**ANNUAL SYLLABUS**  
**CLASS: XI-A**  
**ENGLISH**

**UNIT TEST- 1**

- Unseen Passage
- Notice Writing
- Chapters: The Portrait Of The Lady
- Poem: A Photograph

**HALF YEARLY**

- Unseen Passages
- Advertisements:
- Situation Vacant / Wanted
- Invitation Informal: Replies
- Letter Writing : To Editor, Job Application
- Long Compositions: Article Writing, Report Writing
- Chapters:
  - The Summer Of The Beautiful....
  - We Are Not Afraid To Die
  - Discovering Tut...
  - The Address

**Poems:**

- The Laburnum Top
- The Voice Of The Rain

**UNIT II**

- Unseen PASSAGE
- Writing Skill: Report Writing
- Chapter: Mother's Day
- Poem: Childhood

**ANNUAL**

- Chapter: The Tale Of The Melon City
- Poem: Father To Son

+ Complete Syllabus

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# MATHEMATICS

## UNIT TEST 1

Ch – 1 Sets

- Ch – 5 Linear Inequalities
- Ch – 11 Introduction to 3D Geometry

## HALF-YEARLY EXAMINATION

- Ch – 1 Sets
- Ch – 2 Relations and Functions
- Ch – 3 Trigonometric Functions
- Ch – 4 Complex numbers and Quadratic Equations
- Ch – 5 Linear Inequalities
- Ch – 8 Sequences and series
- Ch – 11 Introduction to 3D Geometry

## UNIT TEST 2

- Ch – 6 Permutations and combinations
- Ch – 7 Binomial Theorem

## ANNUAL EXAMINATION:

- Ch – 1 Sets
  - Ch – 2 Relations and Functions
  - Ch – 3 Trigonometric Functions
  - Ch – 4 Complex numbers and Quadratic Equations
  - Ch – 5 Linear Inequalities
  - Ch – 6 Permutations and combinations
  - Ch – 7 Binomial Theorem
  - Ch – 8 Sequences and series
  - Ch – 9 Straight Lines
  - Ch – 10 Conic sections
  - Ch – 11 Introduction to 3D Geometry
  - Ch – 12 Limits and Derivatives
  - Ch – 13 Statistics
  - Ch – 14 Probability
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# PHYSICS

- Chapter–1 : Units and Measurements
- Chapter–2 : Motion in a Straight Line
- Chapter–3 : Motion in a Plane
- Chapter–4: Laws of Motion
- Chapter–5: Work, Energy and Power
- Chapter–6: System of Particles and Rotational Motion
- Chapter–7: Gravitation
- Chapter–8: Mechanical Properties of Solids
- Chapter–9: Mechanical Properties of Fluids
- Chapter–10: Thermal Properties of Matter
- Chapter–11: Thermodynamics
- Chapter–12: Kinetic Theory
- Chapter–13: Oscillations
- Chapter–14: Waves

## **UNIT TEST-1**

- Ch 1 , 2

## **HALF YEARLY**

- Ch 1 to 5 , Ch 7 , 8

## **UNIT TEST-1**

- Ch 6, 9 ( fluids at rest only )

## **ANNUAL EXAMINATION**

- Ch 1 to 14
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# CHEMISTRY

## **UNIT TEST-1**

- Chapter – 1 (Some basic concepts of chemistry)
- Chapter – 3 (Classification of elements and periodicity in properties)

## **UNIT TEST-2**

- Chapter – 2 (Structure of atom)
- Chapter – 7 (Redox reactions)

## **HALF YEARLY**

- Chapter – 1 (Some basic concepts of chemistry)
- Chapter – 2 (Structure of atom)
- Chapter – 3 (Classification of elements and periodicity in properties)
- Chapter – 4 (Chemical Bonding and molecular structure)
- Chapter – 7 (Redox reactions)

## **UNIT TEST-3**

- Chapter – 5 (Thermodynamics)
- Chapter – 8 (Organic Chemistry- Some basic principles and techniques) [Till Nomenclature]

## **ANNUAL TERM (FULL SYLLABUS)**

- Chapter – 1 (Some basic concepts of chemistry)
- Chapter – 2 (Structure of atom)
- Chapter – 3 (Classification of elements and periodicity in properties)
- Chapter – 4 (Chemical Bonding and molecular structure)
- Chapter – 5 (Thermodynamics)
- Chapter – 6 (Equilibrium)
- Chapter – 7 (Redox reactions)
- Chapter – 8 (Organic Chemistry- Some basic principles and techniques)
- Chapter – 9 (Hydrocarbons)

# **COMPUTER SCIENCE**

## **UNIT TEST-1**

### **Unit 1: Computer Systems and Organisation**

- 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)

## **UNIT TEST-2**

### **Unit 2: Computational Thinking and Programming - I**

- 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 mode, Python character set, Python tokens( keyword, identifier, literal, operator, punctuator), variables, concept of l-value and r-value, use of comments

- 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(), isspace(), lstrip(), rstrip(), strip(), replace(), join(), partition(), split()

## **HALF YEARLY**

### **Unit 1: Computer Systems and Organisation**

- 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)
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- 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.

## **ANNUAL TERM**

### **Unit 1: Computer Systems and Organisation**

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- 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 functions/methods – len(), dict(), keys(), values(), items(), get(), update(), del, clear(), 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 (random(), randint(), randrange()), statistics module (mean(), median(), mode()).

### **Unit 3: Society, Law and Ethics**

- 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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