ACADEMIC YEAR 2025-2026
COMPUTER SCIENCE
CLASS XI
SYLLABUS
FIRST TERM EXAMINATIONS

• Revision of Class X Programming

Numbers Representation of numbers in different bases and interconversion between them (e.g.binary, octal, decimal, hexadecimal). Addition and subtraction operations for numbers in different bases. Introduce the positional system of representing numbers and the concept of a base. Discuss the conversion of representations between different bases using English or pseudo code. These algorithms are also good examples for defining different functions in a class modelling numbers (when programming is discussed). For addition and subtraction (I's complement and 2's complement) use the analogy with decimal numbers, emphasize how carry works (this will be useful later when binary adders are discussed).

• Encodings

(a) Binary encodings for integers and real numbers using a finite number of bits (sign magnitude, 2's complement, mantissa exponent notation). Signed, unsigned numbers, least and most significant bits. Sign-magnitude representation and its shortcomings (two representations for 0, addition requires extra step); two's-complement representation.Operations (arithmetic, logical, shift), discuss the basic algorithms used for the arithmetic operations.Floating point representation: normalized scientific notation, mantissa-exponent representation, binary point (discuss trade-off between size of mantissa and exponent).Single and double precision.

(b) Characters and their encodings (e.g. ASCII, ISCII, Unicode). Discuss the limitations of the ASCII code in representing characters of other languages. Discuss the Unicode representation for the local language. Java uses Unicode, so strings in the local language can be used (they can be displayed if fonts are available) - a simple table lookup for local language equivalents for Latin (i.e. English) character strings may be done.

HALF YEARLY EXAMNATIONS SYLLABUS

Syllabus Covered till FIRST TERM EXAMINATIONS and following:

3. Propositional logic, Hardware implementation, Arithmetic operations (a)Propositional logic, well-formed formulae, truth values and interpretation of well formed formulae, truth tables. Propositional variables; the common logical connectives ((not)(negation), ^ (and)(conjunction), V (or) (disjunction),=>(implication), ⇔(equivalence)); definition of a well-formed formula (wff) representation of simple word problems as wff (this can be used for motivation); the values true and false; interpretation of a wff; truth tables; satisfiable,unsatisfiable and valid formulae. (b) Logic and hardware, basic gates (AND, NOT,OR) and their universality, other gates (NAND, NOR, XOR, XNOR), half adder,full adder. Show how the logic in (a) above can be realized in hardware in the form of gates. These gates can then be combined to implement the basic operations for arithmetic. Tie up with the arithmetic operations on integers discussed earlier in 2(a).

The programming element in the syllabus is aimed at algorithmic problem solving and not merely rote learning of Java syntax. The Java version used should be 5.0 or later. For programming, the students can use any text editor and the javac and java programs or any other development environment: for example, BlueJ, Eclipse,NetBeans etc.BlueJ is strongly recommended for its simplicity, ease of use and because it is very well suited for an objects first' approach.

4. Introduction to Object Oriented Programming using Java Note that topics 5 to 12 should be introduced almost simultaneously along with Classes and their definitions.

5. Objects

(a) Objects as data (attributes) + behaviour (methods or methods); object as an instance of a class. Difference between object and class should be made very clear.BlueJ (www.bluej.org) and Greenfoot (www.greenfoot.org) can be used for this purpose.

(b) Analysis of some real-world programming examples in terms of objects and classes. Use simple examples like a calculator, date, number etc. to illustrate how they can be treated as objects that behave in certain well-defined ways and how the interface provides a way to access behaviour. Illustrate behaviour changes by adding new methods, deleting old methods or modifying existing methods. conditional statements. Nesting of blocks. Variables with block scope, method scope, class scope. Visibility rules when variables with the same name are defined in different scopes.

9. Methods and Constructors Methods and Constructors (as abstractions for complex user defined operations on objects), methods as mechanisms for side effects;formal arguments and actual arguments in methods; different behaviour of primitive and object arguments.Static methods and variables.The this operator.Examples of algorithmic problem solving using methods (number problems,finding roots of algebraic equations etc.). Methods are like complex operations where the object is implicitly, the first argument. Operator this denotes the current object. Methods typically return values. Illustrate the difference between primitive values and object values as arguments (changes made inside methods persist after the call for object values).Static definitions as class variables and class methods visible and shared by all instances.Need for static methods and variables. Introduce the main method - needed to begin execution.Constructor as a special kind of method; the new operator; multiple constructors with different argument structures; constructor returns a reference to the object.

10. Arrays, Strings Structured data types - arrays (single and multidimensional),strings.Example algorithms that use structured data types (searching, finding maximum/minimum, sorting techniques, solving systems of linear equations, substring, concatenation, length, access to char in string, etc.). Storing many data elements of the same type requires structured data types like arrays. Access in arrays is constant time and does not depend on the number of elements.Sorting techniques (bubble, selection, insertion), Structured data types can be defined by classes - String. Introduce the Java library String class and the basic operations on strings (accessing individual characters, various substring operations, concatenation, replacement, index of operations).

FINAL EXAMINATION SYLLABUS

Revision of the Programming Section covered till half yearly examinations and following:

11.Basic input/output Data File Handling (Binary and Text)

(a) Basic input/output using Scanner and Printer classes.Input/output exceptions.Tokens in an input stream, concept of whitespace, extracting tokens from an input stream (String Tokenizer class).The Scanner class can be used for input of various types of data (e.g. int, float, char etc.) from the standard input stream.Similarly,

(c) Basic concept of a virtual machine; Java Virtual Machine (JVM); compilation and execution of Java programs (the javac and java programs).The JVM is a machine but built as a program and not through hardware.Therefore it is called a virtual machine. To run, JVM machine language programs require an interpreter.The advantage is that such JVM machine language programs (.class files) are portable and can run on any machine that has the java program.

(d) Compile time and run time errors; basic concept of an exception, the Exception class, try-catch, throw, throws and finally. Differentiate between compile time and run time errors.Run time errors crash the program.Recovery is possible by the use of exceptions.Explain how an exception object is created and passed up until a matching catch is found.This behaviour is different from the one where a value is returned by a deeply nested method call.

6.Primitive values, Wrapper classes, Types and casting Primitive values and types:byte, int, short, long, float, double, boolean, char.Corresponding wrapper classes for each primitive type. Class as type of the object. Class as mechanism for user defined types.Changing types through user defined casting and automatic type coercion for some primitive types.270 Ideally, everything should be a class; primitive types are defined for efficiency reasons; each primitive type has a corresponding wrapper class. Classes as user defined types. In some cases types are changed by automatic coercion or casting e.g. mixed type expressions. However, casting in general is not a good idea and should be avoided, if possible.

7. Variables, Expressions Variables as names for values; named constants (final),expressions (arithmetic and logical) and_their evaluation (operators, associativity, precedence). Assignment operation; difference between left-hand side and right-hand side of assignment. Variables denote values; variables are already defined as attributes in classes; variables have types that constrain the values it can denote.Difference between variables denoting primitive values and object values-variables denoting objects are references to those objects. The assignment operator = is special. The variable on the LHS of = denotes the memory location while the same variable on the RHS denotes the contents of the location e.g.i=i+2 NOTE:Library functions for solving expressions may be used as and when required.

8. Statements, Scope Statements; conditional (if, if else, if else if, switch case) ternary operator, looping (for, while, do while), continue, break; grouping statements in blocks, scope and visibility of variables. Describe the semantics of the conditional and looping statements in detail. [cite: 71] Evaluation of the condition in the Printer class handles output.Only basic input and output using these classes should be covered. 271 Discuss the concept of a token (a delimited continuous stream of characters that is meaningful in the application programe.g. words in a sentence where the delimiter is the blank character). This naturally leads to the idea of delimiters and in particular whitespace and user defined characters as delimiters. As an example show how the StringTokenizer class allows one to extract a sequence of tokens from a string with user defined delimiters.

(b) Data File Handling. Need for Data file, Input Stream, Output Stream, ByteStream (FileInputStream and FileOutputStream), Character Stream (FileReader,FileWriter),OperationsCreation, Reading, Writing, Appending, and Searching.

12. Recursion Concept of recursion, simple recursive methods (e.g. factorial, GCD,binary search, conversion of representations of numbers between different bases).Many problems can be solved very elegantly by observing that the solution can be composed of solutions to 'smaller' versions of the same problem with the base version having a known simple solution.Recursion can be initially motivated by using recursive equations to define certain methods.These definitions are fairly

obvious and are easy to understand. The definitions can be directly converted to a program.Emphasize that any recursion must have a base case. Otherwise, the computation can go into an infinite loop.

13. Implementation of algorithms to solve problems The students are required to do lab assignments in the computer lab concurrently with the lectures. Programming assignments should be done such that each major topic is covered in at least one assignment. Assignment problems should be designed so that they are sufficiently challenging and make the student do algorithm design, address correctness issues, implement and execute the algorithm in Java and debug where

necessary ,Self-explanatory.

14. Packages Definition, creation of packages, importing user defined packages, interaction of objects across packages. Java Application Programming Interface (API), development of applications using user defined packages.

15. Trends in computing and ethical issues

(a) Artificial Intelligence, Internet of Things, Virtual Reality and Augmented

Reality. Brief understanding of the above and their impact on Society.

(b) Cyber Security, privacy, netiquette, spam, phishing. Brief understanding of the above.

(c) Intellectual property, Software copyright and patents and Free Software Foundation. Intellectual property and corresponding laws and rights, software as intellectual property. Software copyright and patents and the difference between the two; trademarks; software licensing and piracy.Free Software Foundation and its position on software, Open Source Software, various types of licensing (e.g.GPL, BSD). Social impact and ethical issues should be discussed and debated in class.The important thing is for students to realise that these are complex issues and there are multiple points of view on many of them and there is no single 'correct' or 'right' view.

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Class XI
Final Examination 2025-26
Accountancy

(MM: 80)   Weightage

1. Introduction to accounting   10
2. Basics accounting terms
3. Generally accepted accounting principles and basics accounting concept
4. International financial reporting standard (IFRS)
5. Accounting Equation
6. Bases of Accounting
7. Journal   12
8. Sub division of journal
9. Ledger
10. Cash Book & Petty Cash book   08
11. Depreciation   08

Half Yearly Examination

12. Trial balance   04
13. Non-trading organisation   12
14. Bill of Exchange   08

Note: (Syllabus of Quarterly examination) is also included.

Final Examination

15. Rectification of errors   06
16. Provision & reserve
17. Final accounts without adjustments   12
18. Final accounts with adjustments

Note: Syllabus of (Quarterly examination & half yearly exam) is also included.

L. William

Class XI
Final Examination 2025-26
Commerce

Quarterly Examination

(MM: 80)	Weightage
1. Classification of Human Activities: Economic & Non-economic	03
2. Nature & objectives of business	04
3. Classification of business activities	
4. Introduction to Business organisation	03
5. Sole trader	06
6. Partnership	
7. Joint stock company	06
8. Formation of a company	
9. Types of companies	
10. Public enterprises	04
11. Co-operative organisation	06
12. Social responsibility of business & business ethics	

Half Yearly Examination

1. E-business and outsourcing	04
2. Stock exchange	06
3. Wholesale trade	10
4. Retail trade	
5. Documents used in home trade	
6. Chambers of commerce & industry	04
7. Nature & scope of foreign trade	06
8. Types of Companies	

Note: Syllabus of (Quarterly examination) is also included.

Final Examination

1. Export trade	08
2. Import trade	
3. World trade organisation	02
4. Business risk & insurance	08
5. Types of insurance	

Note: Syllabus of (Quarterly examination & half yearly examination) is also included.

L. William

Class XII
Final Examination 2025-26
Commerce

Quarterly Examination

(MM: 80)   Weightage

1. Business Environment	04
2. Capital-Fixed & Capital	04
3. Sources of finance for a joint stock company	08
4. Banking Latest Trends	05
5. Management-meaning, nature & importance	10
6. Principles of management	

Half yearly examination

1. Planning	05
2. Organising	05
3. Staffing	05
4. Directing	05
5. Controlling	05

Note: Syllabus of (Quarterly exam.) is also included.

Pre-board examination

1. Marketing- concept & functions.	06
2. Marketing Mix	08
3. Consumer protection	06
4. Co-ordination	04

Note: Syllabus of (Quarterly exam. & half yearly exam) is also included.

L. William

Class XII
Final Examination 2025-26
Accountancy

Quarterly Examination

	(MM: 80)	Weightage
1.	Accounting for partnership firm fundamentals	11
2.	Goodwill: concept and evaluation	15
3.	Admission of a partner	
4.	Retirement of a partner	
5.	Death of a partner	
6.	Dissolution of partnership firm	08

Half Yearly Examination

1.	Issue of shares	11
2.	Issue of debentures	08
3.	Redemption of debentures	
4.	Financial statement of companies	07
5.	Ratio analysis	08

Note: Syllabus of (Quarterly exam) is also included.

Pre-Board Examination

1.	Comparative statements	04
2.	Common size statements	
3.	Cash flow statements	08

Note: Syllabus of (Quarterly exam and Half Yearly exam) is also included.

L. William

SYLLABUS BIOLOGY (2025-26)
CLASS XI

BOOK: Srijan Biology for I.S.C. schools- Veer Bala Rastogi (Srijan Publishers: Volume I)

FIRST TERM
1) The Living World
2) Morphology of a Flower
3) Virus
4) Plant Growth and Development
5) Kingdom: Monera
6) Kingdom: Protista
7) Kingdom: Fungi
8) Body fluids and Circulation
9) List of scientists and abbreviations(15 each)

SECONDTERM
10) Cell Cycle and Cell division
11) Chemical Co-ordination and Integration
12) Breathing and exchange of gases
13) Plant kingdom(Algae,Bryophyta,Pteridophyta,Gymnosperms.)
14) Morphology and Modifications of Root, Stem , Leaf
15) Anatomy of Flowering plants- Plant tissues
16) Structural organisation in animals-(Frog)
17) Animal Kingdom(Non Chordata, Chordata)
18) List of scientists and abbreviations (20 each)

THIRD TERM
19) Cell- The unit of life
20) Biomolecules
21) Photosynthesis in higher Plants
22) Respiration in plants
23) Excretory products and their elimination
24) Locomotion and Movement
25) Neural Control and co- ordination
26) Complete list of Abbreviations and Scientists.

Syllabus - Chemistry
Class-IX
2025-26.

1ˢᵗ TERM
1. Language of Chemistry
2. Study of Gas Law
3. Atomic Structure and Chemical Bonding
4. The Periodic Table

HALF YEARLY
1. Chemical Changes & Reactions
2. Water
3. Language of Chemistry
4. Study of Gas Laws
5. Atomic Structure and Chemical Bonding
6. The Periodic Table

FINAL EXAMINATION
1. Study of First Element – Hydrogen
2. Atmospheric Pollution
3. Practical Chemistry

● Including all 1ˢᵗ Term & Half Yearly examination Syllabus

Syllabus - Chemistry
Class-X

<u>**2025-26.**</u>

<u>**QUARTERLY EXAM**</u>

    <u>**1.**</u> Periodic properties and variations of properties
    <u>**2.**</u> Chemical bonding.
    <u>**3.**</u> Mole concept and stoichiometry
    <u>**4.**</u> Study of acid, bases and salts
    <u>**5.**</u> Analytical chemistry
    <u>**6.**</u> Hydrogen chloride

<u>**HALF YEARLY EXAM**</u>

    <u>**1.**</u> Electrolysis
    <u>**2.**</u> Nitric acid
    <u>**3.**</u> Sulphuric acid
    <u>**4.**</u> Metallurgy
    <u>**5.**</u> Organic chemistry
    <u>**6.**</u> Ammonia
    <u>**7.**</u> Practical Chemistry
    <u>**8.**</u> All above chapters

<u>**Syllabus - Chemistry**</u>
<u>**Class-XI**</u>
<u>**2025-26.**</u>

<u>**1ˢᵗ TERM:**</u>

1. Redox Reaction
2. Some basic concepts of chemistry
3. Classification of elements and Periodicity in Properties
4. IUPAC [aliphatic hydrocarbons)
5. Structure of atom

2<u>nd</u> TERM:

1. Organic Chemistry
2. Hydrocarbons and including 1st Term syllabus

FINAL EXAMINATION:

1. Equilibrium
2. Chemical Bonding and molecular structure and including 1st term and 2nd term syllabus
3. Thermodynamics

Term – wise Syllabus for Economics (2025-26)

Class – XI

Term I

1. Definitions of Economics
2. Basic concepts of Economics
3. Basic Problems of Economics
4. Types of Economies
5. Solutions to basic Problems of different Economies
6. Problems of Poverty in India
7. Definition, Scope, and importance of Statistics
8. Collection, organization, presentation of Data
9. Measures of Central Value (mean, median, mode)
10. Measures of Dispersion (Quartile deviation)

Term II

11. Economic Growth and Development
12. Parameters of Development
13. Sustainable development
14. Planning and Economic Development in India
15. Indian Economy Post – Liberalization
16. Structural changes in Indian Economy after Liberalization
17. Profile of Indian Agriculture
18. Correlation

Plus Term I

Final Term

19. Human Capital formation in India
20. Unemployment in India
21. Index numbers
22. Some Mathematical Tools in Economics

Complete Syllabus

Pattern of Question Paper [board pattern]

Divisions	Type of Questions	No of Questions	Marks
Section-A	Objective/Very Short Answer Questions	16	1 x 16 = 16
Section-B	Short Answer Questions	8	4 x 8 = 32
Section-C	Long Answer Questions	4	8 x 4 = 32

Weightage of Questions

Theory	48 marks
Statistics	32 marks

ENGLISH LANGUAGE SYLLABUS FOR CLASS XI 2025-26

First Term: i) Composition

ii) Speech Writing, Report Writing, Film Review

iii) Proposal Writing

iv) Grammar

v) Comprehension

Half – Yearly: i) Composition

ii) Article Writing, Review of a Cultural Programme, Speech Writing, Report Writing

iii) Proposal Writing

iv) Grammar

v) Comprehension

(Including the Syllabus of the First Term)

Final Term: i) Composition

ii) Article Writing, Book Review, Review of a Cultural Programme, Speech Writing, Report Writing

iii) Proposal Writing

iv) Grammar

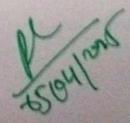v) Comprehension

(Including the Syllabus of the First Term and Half Yearly)

XI (A) *Dalanta*

XI (B & C) *S. Saksena*

ENGLISH LITERATURE SYLLABUS FOR CLASS XI 2025-26

First Term: i) Macbeth: *ACT I*

        ii) Prose: *a-) A Living God – Lafcadio Hearn*

                           b-) The Paper Menagerie

        iii) Poetry: *a) Abhisara: The Tryst – Rabindranath Tagore*

                           b) Why I like the Hospital – Tony Hoagland

Half – Yearly: i) Macbeth: *ACT II*

        ii) Prose: *a) Advice to Youth – Mark Twain*

        iii) Poetry: *a) Sonnet 116 – William Shakespeare*

                           b) Death of a Naturalist – Seamus Heaney

(Including the Syllabus of the First Term)

Final Term: i) Macbeth: *ACT III*

        ii) Prose: *a) The Great Automatic Grammatizator – Roald Dahl*

                           b) Thank You Ma'am – Langston Hughes

        iii)Poetry: *a) Strange Meeting – Wilfred Owen*

(Including the Syllabus of the First Term and Half Yearly

XI (A)   ___Dacosta___

                                             05/04/2025

XI (B & C)   ___S. Saksena___

MATHEMATICS SYLLABUS (2025 – 2026)

CLASS 11

FIRST TERM

1. Angles and Arc Lengths
2. Trigonometrical Functions
3. Compound and Multiple Angles
4. Complex Numbers
5. Quadratic Equations
6. Inequalities

HALF YEARLY

1. Permutations and Combinations
2. Binomial Theorem
3. Sequence and Series
4. Sets
5. Relations and Functions
6. Limits
7. Differentiation

*First Term Syllabus included

FINAL TERM

1. Basic Concepts of Points and their Coordinates
2. The Straight Line
3. Circle
4. Parabola
5. Ellipse
6. Hyperbola
7. Points and their Coordinates in 3-Dimensions
8. Measures of Central Tendency
9. Measures of Dispersion
10. Probability

FINAL EXAMINATION

Whole Syllabus

WEIGHTAGE OF MARKS (MATHEMATICS - CLASS 11)

FIRST TERM EXAMINATION

TOPICS (80 Marks)	WEIGHTAGE
Algebra	45 Marks
Trigonometry	35 Marks

HALF YEARLY EXAMINATION

TOPICS (80 Marks)	WEIGHTAGE
Sets, Relation and Functions	12 Marks
Trigonometry	15 Marks
Algebra	40 Marks
Calculus	13 Marks

FINAL EXAMINATION

TOPICS (80 Marks)	WEIGHTAGE
Sets , Relations and Functions, Trigonometry	18 Marks
Algebra	26 Marks
Coordinate Geometry	20 Marks
Calculus	8 Marks
Statistics and Probability	8 Marks

PHYSICAL EDUCATION

Class-XI

Session (2025-26)

Ist Term Examination

1. Chapter1-**Concept of Physical Education.**
2. Chapter2- **Individual Aspects and Group Dynamics.**

IInd Term Examination

1. Chapter1-**Concept of Physical Education.**
2. Chapter2-**Individual Aspects and Group Dynamics.**
3. Chapter3-**Effects of Physical Exercise on Human Body Systems.**
4. Chapter4- **Nutrition, Weight Control and Exercise.**

Annual Examination

1. Chapter1-**Concept of Physical Education.**
2. Chapter2-**Individual Aspects and Group Dynamics.**
3. Chapter3-**Effects of Physical Exercise on Human Body Systems.**
4. Chapter4-**Nutrition, Weight Control and Exercise.**
5. Chapter5-**Physical Fitness and Wellness.**
6. Chapter6-**Games and Sports at a Global Perspective.**

SYLLABUS OF PHYSICS
CLASS XI
SESSION 2025-26
UNIT NAME

EXAMINATION		MARKS ALLOTTED
IST TERM	PHYSICAL WORLD	10
	UNITS AND ERROR ANALYSIS	
	DIMENSIONAL ANALYSIS	
	MOTION IN A STRAIGHT LINE	20
	MOTION IN A PLANE.	
	NEWTON'S LAW OF MOTION.	20
	FRICTION.	10
	UNIFORM CIRCULAR MOTION	10
	PRACTICAL	30
	TOTAL	100
HALFYEARLY	MOTION IN A PLANE.	10
	NEWTON'S LAW OF MOTION.	
	FRICTION.	
	UNIFORM CIRCULAR MOTION	
	WORK ENERGY AND POWER	10
	CENTRE OF MASS.	10
	ROTATIONAL MOTION OF A RIGID BODY	20
	GRAVITATIONAL I AND II	20
	PRACTICAL	30
	TOTAL	100
ANNUAL EXAMINATION	MOTION IN A PLANE.	05
	NEWTON'S LAW OF MOTION.	
	FRICTION.	
	UNIFORM CIRCULAR MOTION	
	WORK ENERGY AND POWER	
	CENTRE OF MASS.	
	ROTATIONAL MOTION OF A RIGID BODY	
	GRAVITATIONAL I AND II	
	ELASTICITY	15
	FLUID PRESSURE	10
	FLOW OF FLUID	10
	THERMODYNAMICS	10
	HEAT TRANSFER	
	ISOTHERMAL PROCESS AND ADIABATIC PROCCESS	10
	SECOND LAW OF THERMODYNAMICS	
	BEHAVIOUR OF IDEAL GAS AND KINETIC THEORY OF GASES	
	SHM AND OSCILLATION	10
	MECHANICAL WAVE PROGRESSIVE WAVES	
	SUPERPOSITION OF WAVES	
	VIBRATION OF STRETCHED STRINGS	
	DOPPLERS EFFECT	
	PRACTICAL	30
	TOTAL	100