ICSE Class 10 Computer Applications

Unit-wise syllabus and marks for the 2026-27 session.

UNITS	SESSION
8	2026-27

Exam pattern. Two components of 100 marks each. Theory: one written paper of 2 hours carrying 100 marks. Internal Assessment (practical): 100 marks, evaluated jointly by the subject teacher (50 marks) and a visiting external examiner (50 marks).

Practical. Internal Assessment requires a minimum of 20 laboratory assignments completed during the year, covering class design, coding, documentation, execution and testing in BlueJ/Java. Evaluation criteria include class design (10), variable description (10), coding and documentation (10) and execution/output (20), with the subject teacher and external examiner each awarding 50 marks.

#	UNIT AND TOPICS	MARKS
1	**Revision of Class IX Syllabus** Introduction to Object-Oriented Programming concepts; Elementary concept of objects and classes; Values and data types (primitive and non-primitive); Operators in Java and expressions; Statements, scope and lifetime of variables; Input in Java (Scanner class); Mathematical library methods (Math class); Conditional constructs (if, if-else, switch-case)	–
2	**Class as the Basis of All Computation** Objects as instances of a class encapsulating state and behaviour; Member variables (attributes) and member methods; Class as a composite type and an object factory; Primitive vs composite data types; Differences between objects and classes	–
3	**User-Defined Methods** Need for and syntax of methods; Method definition, declaration and method calling; Method prototype, parameters and arguments; Call by value and call by reference (actual vs formal parameters); Method overloading and polymorphism; Static and non-static (instance) methods; Pure and impure methods	–
4	**Constructors** Definition and characteristics of a constructor; Default constructor; Parameterised constructor; Constructor overloading; Difference between constructors and methods	–
5	**Library Classes**	–

#	UNIT AND TOPICS	MARKS
	Wrapper classes for primitive data types; Autoboxing and unboxing; Methods to convert numeric and character data (parseInt, parseDouble, etc.); Character checking methods (isDigit, isLetter, isWhitespace, etc.); Case conversion methods (toUpperCase, toLowerCase)	
6	**Encapsulation** Concept of encapsulation and data hiding; Access specifiers: private, protected, public; Scope of variables: class, instance, local and argument; Visibility rules	–
7	**Arrays** Single-dimensional arrays: declaration, initialisation, accessing elements; Double-dimensional arrays and matrix operations (row, column, diagonal sums); Sorting techniques: selection sort and bubble sort; Searching techniques: linear search and binary search	–
8	**String Handling** String class and its methods (length, charAt, indexOf, substring, etc.); String comparison (equals, equalsIgnoreCase, compareTo); Case conversion and trimming (toLowerCase, toUpperCase, trim, replace); Character extraction and manipulation; Concatenation and string-based programs (palindrome, reverse, etc.)	–

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