



HYDERABAD (SINDI)
NATIONAL COLLEGIATE BOARD

HSNC Board's

Smt. Chandibai Himathmal Mansukhani College

(Autonomous)

(Affiliated to the University of Mumbai)

University College Code : 217-JD Office : T14



Estd. 1965

Principal : Dr. Manju Lalwani Pathak

Ref No: CHM (A) AC/C/01/2025

Date: 18th June 2025

CIRCULAR

The immediate attention of all concerned is invited to this office Circular No. CHM (A) AC 05/2025 dated 19th May, 2025 regarding the Choice Based and Credit Based Syllabus (CBCS) for all subjects of F.Y.B.Sc. & T.Y.B.Sc. in Information Technology SEM - I & SEM - V respectively.

It is hereby communicated that the recommendations of the syllabus made by the Ad-hoc Board of Studies in Information Technology coordinated by the Dean, Faculty of Applied Sciences in the meeting of Academic Council held on 23rd May, 2025 vide item No. 2.2, have been accepted and subsequently passed.

In accordance, therewith, the syllabus as per the CBCS has been brought into force with effect from the academic year 2025 – 2026 and accordingly the same is attached for reference and is available on the College's website www.chmcollege.in

Ulhasnagar - 421 003

18th June, 2025

Dr. Manju Lalwani Pathak

Principal & Chairperson, Academic Council

Copy forwarded for information to:-

- 1) The Dean, Faculty of Applied Sciences
- 2) The Chairperson, Ad-hoc Board of Studies.
- 3) The Controller of Examination.
- 4) The Registrar



HSNC Board's
Smt. Chandibai Himathmal Mansukhani College, Ulhasnagar
(Autonomous)
Affiliated to the University of Mumbai

Bachelor of Science
(Information Technology)
(Self-Financing Course)

Semester – I

Choice Based and Credit Based syllabus
as per NEP 2020 with effect from the Academic
Year 2025-2026

PREAMBLE

Information Technology (IT) is a dynamic and rapidly evolving field that plays a crucial role in today's digital world. With technology becoming central to daily life and work, the demand for skilled IT professionals is growing across industries. The National Education Policy (NEP) supports this growth by offering a modern, flexible, and multidisciplinary approach to learning. It allows students to tailor their education—ranging from short-term certifications to a full B.Sc. (Honours) with Research—based on their interests and goals.

The B.Sc. in Information Technology program is designed to build a strong foundation in IT concepts and practical skills. It prepares students to design, develop, and manage IT systems effectively. Graduates gain expertise in programming, data structures, system design, and emerging technologies such as AI, machine learning, cloud computing, and IoT. They also develop analytical thinking, problem-solving, and communication skills, enabling them to meet industry demands and pursue advanced research or innovation-driven careers.

PROGRAMME SPECIFIC OUTCOMES (PSOs)

PSO-1: Graduates will have a strong understanding of core and advanced IT concepts and will be able to develop practical software solutions using robust programming and development skills.

PSO-2: Graduates will be capable of analyzing user and organizational needs to design effective IT systems, including the ability to design, implement, and manage databases for efficient data storage and retrieval.

PSO-3: Graduates will understand how computer networks function and how to apply security practices to protect systems and data.

PSO-4: They will be able to develop web applications using various technologies and create user-friendly interfaces based on good design principles.

PSO-5: Graduates will demonstrate the ability to plan, manage, and successfully complete IT projects while effectively communicating technical information and collaborating with team members to achieve common goals.

**Smt. Chandibai Himathmal Mansukhani College
(Autonomous)**

**First Year B. Sc.
(Information Technology)**

Semester- I

Title: Programming with C

**Vertical - 1
Major Course - 2 Credits**

**with effect from
Academic Year 2025-2026**

Title: Programming with C

Course Code: CHMITI1

Sr. No.	Heading	Particulars
1	Description of the Course:	This course allows the students to understand the fundamental concepts of programming which will allow them to program applications in C.
2	Vertical 1	Major
3	Type & Teaching Method	Theory + Practicum (Lectures / Problem Solving / Discussion / Presentation / Case Study / Demonstration etc.)
4	Credit	2 Credits
5	Hours allotted	30 Hours
6	Marks allotted	50 Marks
7	Course Objectives: 1. To understand the concepts of computer programming. 2. To understand syntax and semantics of the C language 3. To understand loops and decision making in programming. 4. To understand the use of arrays, structures, and pointers. 5. To understand functions for modular code and handle errors.	
8	Learning Outcomes: Student will be able to: LO1: Build flowcharts, pseudocode for C programs. LO2: Use C language syntax and semantics in their programs. LO3: Implement loops and decision making. LO4: Use different types of data structures in their programs. LO5: Write well-structured, readable, and maintainable C code and debug programs if there are any errors.	

Syllabus

UNIT I

- **Introduction:** algorithms, flowcharts, pseudo code, history of C language, structure of a C program, understanding C syntax, character set, identifiers and keywords, data types, constants and its types, symbolic constants, variable declaration, variable initialization, input and output using printf and scanf, character and character strings, typedef, C preprocessor, Arrays: declaration, initialization, and access of one-dimensional and two-dimensional arrays.
- **Operators:** arithmetic operators, relational operators, logical operators, increment and decrement operators, assignment operator, compound assignment operators, conditional operator, operator precedence, order of evaluation in expressions

UNIT II

- **Control Structures in C:** code blocks, simple if, if-else, if-else-if ladder, nested if, switch, while loop, for loop, do-while loop, break, continue, and nesting of loops.
- **Functions and Pointers:** user defined and library functions, definition of pointers, declaration and initialization of pointers, address-of operator (&), dereferencing operator (*), pointer arithmetic, pointers and arrays, pointer and function arguments
- **Introduction to structure type:** definition, syntax and declaration, structure variable declaration, accessing members using dot operator, structure initialization.

Scheme of Examination and Assessment Pattern

Paper – 50 Marks

External Examination: Semester End External - 30 marks Time: 1:00 hour

Format of Question Paper

Question	Based On	Options	Marks
Q1	Unit 1	Any 2 out of 4	10
Q2	Unit 2	Any 2 out of 4	10
Q3	Unit 1 & 2	Any 2 out of 4	10
			Total: 30

Internal Examination: Continuous Evaluation - 20 marks

	Assessment / Evaluation	Marks
1.	Class Test- It should be conducted using any Learning Management System such as MOODLE. The test should have 10 MCQ's which should be solved in a time duration of 20 minutes.	10
2.	Project, Presentation, Self-Learning Evaluation, etc. (any two)	10
		Total: 20

REFERENCES:

1. C Programming Language, Brian W. Kernighan, Dennis M. Ritchie, 2017
2. Let Us C, Yashvant Kanetkar, BPB Publications, 2008.
3. Mastering in C, K. R. Venugopal and Sudeep R. Prasad, Tata McGraw-Hill Publications.
4. A Computer Science –Structure Programming Approaches using C, Behrouz Forouzan, Cengage Learning.
5. Schaum's outlines Programming with C, Byron S. Gottfried, Tata McGraw-Hill Publications.
6. Basics of Computer Science, by Behrouz Forouzan, Cengage Learning.
7. Programming Techniques through C, by M. G. Venkateshmurthy, Pearson Publication.
8. <https://www.educative.io/courses/advanced-programming-techniques-in-c>
9. <https://www.learnvern.com/c-programming-tutorial>

**Smt. Chandibai Himathmal Mansukhani College
(Autonomous)**

**First Year B. Sc.
(Information Technology)**

Semester- I

Title: Database Management System

**Vertical - 1
Major Course - 2 Credits**

**with effect from
Academic Year 2025-2026**

Title: Database Management System
Course Code: CHMITI2

Sr. No.	Heading	Particulars
1	Description of the Course:	The objective of the course is to present an introduction to fundamentals of database management systems, with an emphasis on how to organize, maintain and retrieve - efficiently, and effectively -information from a DBMS.
2	Vertical 1	Major
3	Type & Teaching Method	Theory + Practicum (Lectures / Problem Solving / Discussion / Presentation / Case Study / Demonstration etc.)
4	Credit	2 Credits
5	Hours allotted	30 Hours
6	Marks allotted	50 Marks
7	Course Objectives: 1. To make students aware fundamentals of database system. 2. To give idea how ERD components helpful in database design and implementation. 3. To experience the students working with database using MySQL. 4. To familiarize the student with normalization, SQL for querying, manipulating, and managing database data. 5. To make students aware transaction management, concurrency control, and database recovery techniques.	
8	Learning Outcomes: Student will be able to: LO1: Define and describe the fundamental elements of relational DBMS. LO2: Relate the basic concepts of relational data model, entity-relationship model, relational database. LO3: Design ER-models to represent simple database application scenarios. LO4: Understand the normalization and its role in the database design process. LO5: Transform the ER-model to relational tables, populate relational database and formulate SQL.	

Syllabus

UNIT I

- **Introduction to Databases and transactions:** What is database system, purpose of database system, view of data, relational databases, database architecture
- **Data Models:** The importance of data models, Basic building blocks, Business rules, The evolution of data models, Degrees of data abstraction
- **Database Design, ER-Diagram:** Database design and ER Model: overview, ER-Model, Constraints, ER-Diagrams, ERD Issues, Codd's rules, The enhanced entity relationship model. Relational database design by ER- and EER-to-Relational-Mapping.
- **Relational database model:** Logical view of data, keys, integrity rules

UNIT II

- **Database Design theory and normalization:** Basics of functional dependencies, Normalization, Normal forms based on primary key, Second and Third Normal Forms, Boyce-Codd Normal Form.
- **Structured Query Language:** SQL Data Definition and Data Types, Specifying Constraints in SQL (Primary Key, Foreign Key, Unique, Not Null, Check), Select queries (Where, Order By, Distinct), Data Manipulation Commands, Joining Database Tables, SQL Join Operators, Aggregate Function, Group by clauses, Subqueries, Schema Modification, Views: Creating and updating view.
- **Transaction management and concurrency control and recovery:** Introduction to transaction processing concepts and theory. Concurrency control technique. Database recovery technique.

Scheme of Examination and Assessment Pattern

Paper – 50 Marks

External Examination: Semester End External - 30 marks Time: 1:00 hour

Format of Question Paper

Question	Based On	Options	Marks
Q1	Unit 1	<i>Any 2 out of 4</i>	10
Q2	Unit 2	<i>Any 2 out of 4</i>	10
Q3	Unit 1 & 2	<i>Any 2 out of 4</i>	10
			Total: 30

Internal Examination: Continuous Evaluation - 20 marks

	Assessment / Evaluation	Marks
1.	Class Test-It should be conducted using any Learning Management System such as MOODLE. The test should have 10 MCQ's which should be solved in a time duration of 20 minutes.	10
2.	Project, Presentation, Self-Learning Evaluation, etc. (any two)	10
		Total: 20

REFERENCES:

1. "Fundamentals of Database System", Elmasri Ramez, Navathe Shamkant, Pearson Education, Seventh edition, 2017
2. Database Management Systems", Raghu Ramakrishnan and Johannes Gehrke, 3rd Edition, 2014
3. Database Systems: Design implementation and management by Carlos Coronel, Steven Morris, Peter Rob
4. "Database System Concepts", Abraham Silberschatz, Henry F. Korth, S. Sudarshan, McGraw Hill, 2017
5. "MySQL: The Complete Reference", Vikram Vaswani, McGraw Hill, 2017
6. "Learn SQL with MySQL: Retrieve and Manipulate Data Using SQL Commands with Ease", Ashwin Pajankar, BPB Publications, 2020
7. <https://www.tutorialspoint.com/dbms/index.htm>

**Smt. Chandibai Himathmal Mansukhani College
(Autonomous)**

**First Year B. Sc.
(Information Technology)**

Semester- I

Title: Major Practical 1

**Vertical - 1
Major Course - 2 Credits**

**with effect from
Academic Year 2025-2026**

Title: Major Practical 1
Course Code: CHMITI3

Sr. No.	Heading	Particulars
1	Description of the Course:	Programming with C-Practical This course is stepping stone to learn other languages. This course provides students hands on experiences of coding exercises and projects. Database Management System-Practical DBMS practical approach is useful to gain the knowledge for software backend development. It benefits to user by providing data definition, data access, reduced data redundancy, data integrity, data sharing, data organizing, data consistency, data accuracy, and security.
2	Vertical 1	Major
3	Type	Practical
4	Credit	2 Credits
5	Hours allotted	60 Hours
6	Marks allotted	50 Marks
7	Course Objectives:	1. To learn how to develop algorithms, draw flowcharts, and write efficient code using loops and decision-making techniques. 2. To understand the use of arrays, structures, functions, and pointers in programming. 3. Identify entities, their relationships, and design relational database structures using appropriate models and constraints. 4. Apply SQL to create, manipulate, and retrieve data from relational databases, including DML operations, built-in functions, joins, and nested queries. 5. Demonstrate advanced data retrieval techniques, implement access control, and understand concepts like virtual tables and user privileges.

8	Learning Outcomes: Student will be able to: LO1: Demonstrate and implement the use of data types, variables, operators, control statements, and loops in C programming. LO2: Effectively use arrays, strings, structures, functions, and pointers to write C programs. LO3: Perform core database operations such as inserting, updating, deleting, altering tables, and managing backups using SQL. LO4: Retrieve and manipulate data using SQL queries involving aggregate functions, joins, nested queries, and virtual tables. LO5: Implement data security measures including user access control and attribute-level data abstraction.
9	Unit 1: Programming with C Practical 1 - Write a program to print your name enclosed in double quotes. - Write a C program to convert Indian rupee to: US Dollar, Euro, British Pound, Bahrain Dinar and Swiss Franc. - Write a program to swap two numbers with using a third variable. - Write a program to swap two numbers without using a third variable. - Write a program to find area of rectangle, square and circle. Practical 2 - Write a program to print the ASCII value of a given character. - Write a program to accept your full name from the user and display the message: 'Hello [full name], have a good day.' - Write a program to print the adjacent even numbers of a given odd number. - Write a program to convert a two-digit number to word (using switch statement). - Write a program to print rollno and names of 5 students using array. Practical 3 - To calculate simple interest taking principal, rate of interest and number of years as input from user. Write algorithm & draw flowchart for the same. - Write a program to find greatest of three numbers using conditional operator. Write algorithm & draw flowchart for the same. - Write a program to check if the year entered is leap year or not. Write algorithm & draw flowchart for the same. Practical 4 - Write a program to calculate roots of a quadratic equation. - Write a menu driven program using switch case to perform add / subtract / multiply / divide based on the user's choice. - Write a program to print the pattern the following pattern <pre> 1 1 2 1 1 2 3 2 1 1 2 3 4 3 2 1 </pre>

- d. Write a program to print the pattern the following pattern

```
1
2 3
4 5 6
7 8 9 10
```

- e. Write a program to print the pattern the following pattern

Practical 5

- a. Write a program to print the pattern the following pattern

```
5 4 3 2 1 2 3 4 5
4 3 2 1 1 2 3 4
3 2 1 1 2 3
2 1 1 2
1 1
```

- b. Write a program using while loop to reverse the digits of a number.
c. Write a program to calculate the factorial of a given number.
d. Write a program to print the Fibonacci series.

Practical 6

- a. Write a program to square root, abs() value using function.
b. Write a program to print area of square using function.
c. Write a program to convert a given number into words. For example, if the input is 567, the output should be: "Five Six Seven" using function.
d. Write a program to sort the elements of array in ascending or descending order using function.

Practical 7

- a. Write a program to extract the portion of a character string and print the extracted part.
b. Write a program to find the given string is palindrome or not.
c. Write a program to using strlen(), strcmp() function.
d. Write a program to swap two numbers using a function. Pass the values to be swapped to this function using call-by-value method and call-by-reference method.

Practical 8

- a. Write a program to read a matrix of size m*n.
b. Write a program to multiply two matrices using a function.
c. Write a program to interchange any two rows of a given 3×3 matrix.
d. A one-dimensional array of size 15 containing the market quotations of the share prices of a company for the month of January 2002 is tabulated below. Write a program to read this array and print the 5-day moving average data between the days 3 and 12. The 5-day moving average corresponding to a particular day d is the average of the prices on days d-2, d-1, d, d+1, d+2

Day	Price	Day	Price	Day	Price	Day	Price
1	222	5	226	9	245	13	300
2	222	6	229	10	252	14	311
3	223	7	235	11	251	15	311
4	228	8	241	12	270		

Practical 9

- Write a program to perform multiplication and division of two numbers using pointer variables.
- Write a program using pointers to compute the sum of all elements stored in an array.
- Write a program that swaps two numbers passed to a function by reference
- Write a program to print the structure using Title
Author Subject Book ID
Print the details of two students.

Practical 10

Create a mini project on "Bank management system". The program should be menu driven.

Unit 2: Database Management System

1. Perform the following:

- Viewing all databases
- Viewing all Tables in a Database
- Creating Tables (Without Constraints)
- Creating Tables (With Constraints (Domain, Key constraints (Primary/Foreign keys), not null, unique, default, Check)) inserting/Updating/Deleting Records in a Table

2. Perform the following:

- Altering a Table
- Dropping/Truncating/Renaming Tables
- Backing up / Restoring a Database

3. Perform the following:

- Select Queries
- Simple Queries with Aggregate functions
- Queries involving
- Order by Clause
- Group By and Having clause

4. Queries involving

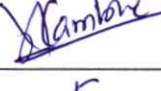
- Date Functions
- String Functions
- Math Functions

	5. Queries involving • Logical Operators • Special Operator (Between, Is Null, Like) • Set Operation (Union, Intersect, Except) 6. Join Queries • Inner Join • Outer Join 7. Subqueries • Single-row and Multi-row • With IN clause • With EXISTS clause 8. Views • Creating Views (with and without check option) • Dropping views • Selecting from a view 9. DCL and TCL statements - Granting and revoking permissions 10. Saving (Commit) and Undoing (rollback)																								
10	Scheme of Examination and Assessment Pattern Paper – 50 Marks External Examination: Semester End External - 30 marks Time: 2:00 hour Format of Question Paper <table><tr><th>Question</th><th>Based On</th><th>Marks</th></tr><tr><td>Q1</td><td>Unit 1</td><td>15</td></tr><tr><td>Q2</td><td>Unit 2</td><td>15</td></tr><tr><td colspan="2"></td><td>Total: 30</td></tr></table> Note: • Certified Journal is compulsory for appearing at the time of Practical Exam, failing which they will not be allowed to appear for the examination. • Students are required to perform 75% of the Practicals for the journal to be duly certified. The journal serves as a record of their practical work and is essential component of the evaluation process. Internal Examination: Continuous Evaluation - 20 marks <table><tr><th></th><th>Assessment / Evaluation</th><th>Marks</th></tr><tr><td>1.</td><td>The internal evaluation will be determined by the completion of practical tasks and the submission of corresponding write-ups for each session. Each practical exercise holds a maximum value of 5 marks. The total evaluation, out of 100 marks, should be scaled down to a final score of 10 marks.</td><td>10</td></tr><tr><td>2.</td><td>Viva/ Case Study/ MCQs/ Mini-Projects/ Complete the code block/ Develop the incomplete portion of the code etc.</td><td>10</td></tr><tr><td colspan="2"></td><td>Total: 20</td></tr></table>	Question	Based On	Marks	Q1	Unit 1	15	Q2	Unit 2	15			Total: 30		Assessment / Evaluation	Marks	1.	The internal evaluation will be determined by the completion of practical tasks and the submission of corresponding write-ups for each session. Each practical exercise holds a maximum value of 5 marks. The total evaluation, out of 100 marks, should be scaled down to a final score of 10 marks.	10	2.	Viva/ Case Study/ MCQs/ Mini-Projects/ Complete the code block/ Develop the incomplete portion of the code etc.	10			Total: 20
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2. Pearson Education, Seventh edition, 2017.
3. Database Management Systems", Raghu Ramakrishnan and Johannes Gehrke,
4. 3rd Edition, 2014
5. MASTERING C, K. R. Venugopal and Sudeep R. Prasad, Tata McGraw-Hill Publications.
6. "A Computer Science –Structure Programming Approaches using C", Behrouz Forouzan, Cengage Learning.
7. Schaum's outlines "Programming with C", Byron S. Gottfried, Tata McGraw-Hill Publications.
8. "Basics of Computer Science", Behrouz Forouzan , Cengage Learning.
9. "MySQL: The Complete Reference", Vikram Vaswani , McGraw Hill, 2017.
10. "Learn SQL with MySQL: Retrieve and Manipulate Data Using SQL Commands with Ease", Ashwin Pajankar, BPB Publications, 2020.
11. <https://www.educative.io/courses/advanced-programming-techniques-in-c>
12. <https://www.tutorialspoint.com/dbms/index.htm>

Department of B.Sc. (Information Technology):

Sr No	Name of the Faculty	Designation and College	Signature
1.	Mr. Agi Thomas	Assistant Professor, Smt.CHM College, Ulhasnagar	
2.	Dr. Shiji Johnson	Assistant Professor, Smt.CHM College, Ulhasnagar	
3.	Ms. Neha Kambale	Assistant Professor, Smt.CHM College, Ulhasnagar	
4.	Ms. Pooja Gupta	Assistant Professor, Smt.CHM College, Ulhasnagar	

Name & Signature of the BoS Chairperson: AGI THOMAS



Name & Signature of the Dean: Ms. Ritika Sachdev



**Smt. Chandibai Himathmal Mansukhani College
(Autonomous)**

**First Year B. Sc.
(Information Technology)**

Semester- I

**Vertical - 2
Minor Course**

Not Applicable

**with effect from
Academic Year 2025-2026**

**Smt. Chandibai Himathmal Mansukhani College
(Autonomous)**

**First Year B. Sc.
(Information Technology)**

Semester- I

**Vertical - 3
Open Elective Course - 2+2 Credits**

**with effect from
Academic Year 2025-2026**

OPEN ELECTIVES (OE)

For First Year B.Sc.

(Computer Science, Information Technology, Biotechnology, Data Science)

Students are required to select any two OE subject from the list below

Sr. No	Subject Name
1.	Communicative English
2.	Performing Arts
3.	Journalism in Hindi
4.	Event Management Course in Sindhi
5.	Basic Tools of AI for Economics and Education
6.	Political Communication and Media Skills
7.	Stress Management - I
8.	Social Media and Communication
9.	Urbanization and Real Estate: Concepts and Contemporary Scenarios
10.	Business of Travel and Tours
11.	Lessons of Reel Making
12.	Basic Accounting
13.	Soft Skills for Corporate Life
14.	Business Statistics and SPSS
15.	Beautician : Strategic Business Planning
16.	Current Trends of Fashion Design: Financial Perspective
17.	Digital Marketing
18.	Managing Family Wealth through Family Office
19.	Online Trading in Stock Market



**Smt. Chandibai Himathmal Mansukhani College
(Autonomous)**

**First Year B. Sc.
(Information Technology)**

Semester- I

Title: Combinational and Sequential Design

**Vertical - 4
Vocational Skill Course (VSC) - 2 Credits**

**with effect from
Academic Year 2025-2026**

Title: Combinational and Sequential Design
Course Code: CHMIT15

Sr. No.	Heading	Particulars
1	Description of the Course:	Combinational and Sequential Design is a course that offers students a comprehensive understanding of digital circuits' design principles and techniques. The knowledge and skills gained from this course are highly useful and applicable in various industries, with promising career prospects.
2	Vertical 4	Vocational Skill Course (VSC)
3	Type	Practical
4	Credit	2 Credits
5	Hours allotted	60 Hours
6	Marks allotted	50 Marks
7	Course Objectives: 1. To provide students with a comprehensive understanding of combinational and sequential circuit design principles and techniques. 2. To enable students to apply Boolean algebra, K-map simplification, and other design techniques to create optimized digital circuits. 3. To equip students with the necessary tools and skills to implement arithmetic circuits, data path circuits, and memory circuits. 4. To enable students to analyze and troubleshoot digital circuits to ensure optimal performance. 5. To provide students with hands-on practical experience in designing and implementing digital circuits using simulation software and real-world hardware.	
8	Learning Outcomes: Student will be able to: LO1: Explain the differences between combinational and sequential circuits and recognize their various applications. LO2: Define Boolean algebra and understand its role in designing digital circuits. LO3: Apply K-map simplification and other techniques to design efficient combinational	

	circuits. LO4: Design and implement arithmetic circuits (like adders, subtractors, and multipliers) and data path components (such as registers, multiplexers, and decoders). LO5: Build, test, and troubleshoot digital circuits using breadboards, logic probes, oscilloscopes, and performance measurement tools.
9	Unit 1: 1. Study of Logic gates and their ICs and universal gates: a. Study of Number Systems: Binary, Octal, Hexadecimal, BCD and Excess 3 b. Study of Binary and BCD addition and subtraction c. Study of AND, OR, NOT, XOR, XNOR, NAND and NOR gates d. Study of IC 7400, 7402, 7404, 7408, 7432, 7486, 74266 e. Implement AND, OR, NOT, XOR, XNOR using NAND gates. f. Implement AND, OR, NOT, XOR, XNOR using NOR gates. 2. Implement the given Boolean expressions using minimum number of gates. a. Verifying De Morgan's laws. b. Implement other given expressions using minimum number of gates. c. Implement other given expressions using minimum number of ICs. 3. Implement combinational circuits. Design and implement combinational circuit based on the problem given and minimizing using K-maps. (Various Equations, SOP, POS forms can be given) 4. Implement code converters. a. Design and implement Binary – to – Gray code converter. b. Design and implement Gray – to – Binary code converter. c. Design and implement Binary – to – BCD code converter. d. Design and implement One bit comparator. e. Design and implement 2-bit Comparator. 5. Implement Adder and Subtractor Arithmetic circuits. a. Design and implement Half adder and Full adder. b. Design and implement BCD adder. c. Design and implement XS – 3 adders. d. Design and implement binary subtractor. e. Design and implement BCD subtractor f. Design and implement XS – 3 subtractor. Unit 2: 6. Multiplexer and Demultiplexers. a. Design and implement 4:1 multiplexer. Study of IC 74153, 74157 b. Design and implement 1:4 demultiplexer. Study of IC 74139 c. Implement the given expression using IC 74151 8:1 multiplexer. 7. Encoders and Decoders. a. Design and implement 8:3 encoder.

	b. Design and implement 3:8 decoder. c. Design and implement BCD to Decimal Encoder d. Implementation of digits using seven segment displays using decoder IC 7447/7448 8. Study of flip-flops. a. Study of flip-flops and counters. b. Study of IC 7473. c. Study of IC 7474. d. Study of IC 7476. e. Conversion of Flip-flops. 9. Sequential Logic Circuit: Counters. a. Study of Serial, Parallel and combinational counters. b. Study of IC 7490, 7492, 7493 and designing mod-n counters using these. 10. Design of shift registers and shift register counters. a. Design serial – in serial – out, serial – in parallel – out, parallel – in serial – out, parallel – in parallel – out b. Study of ID 7495. c. Implementation of digits using seven segment displays. (Included in Practical 7 d.) d. Design and Implement 3 stage Johnson Counter e. Design and implement 3 stage Ring Counter.												
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Question	Based On	Marks											
Q1	Unit 1	15											
Q2	Unit 2	15											
		Total: 30											

Internal Examination: Continuous Evaluation - 20 marks

	Assessment / Evaluation	Marks
1.	The internal evaluation will be determined by the completion of practical tasks and the submission of corresponding write-ups for each session. Each practical exercise holds a maximum value of 5 marks. The total evaluation, out of 100 marks, should be scaled down to a final score of 10 marks .	10
2.	Viva/ Case Study/ MCQs/ Mini-Projects/ Complete the code block/ Develop the incomplete portion of the code etc.	10
		Total: 20

11**REFERENCES:**

1. Digital Electronics and Logic Design, N. G. Palan, Technova
2. Digital Principles and Applications, Malvino and Leach, Tata McGrawHill
3. Modern Digital Electronics, R. P. Jain, Tata McGrawHill
4. Digital Design, M. Morris R. Mano, Michael D. Ciletti, Pearson Education, 2012
5. <https://www.geeksforgeeks.org/digital-electronics-logic-design-tutorials/>

**Smt. Chandibai Himathmal Mansukhani College
(Autonomous)**

**First Year B. Sc.
(Information Technology)**

Semester- I

Title: Office Tools for Data Management

**Vertical - 4
Skill Enhancement Course (SEC) - 2 Credits**

**with effect from
Academic Year 2025-2026**

Title: Office Tools for Data Management

Course Code: CHMITI6

Sr. No.	Heading	Particulars
1	Description of the Course:	Introduction: The MS Access course offers a comprehensive understanding of Microsoft's relational database management system, making it a valuable skill in today's data-driven environment. This course is designed to empower individuals with the tools needed to efficiently organize, manage, and analyse data. Relevance and Usefulness: It provides practical insights into leveraging a relational database system for enhanced efficiency and organization. The MS Access course is useful for individuals seeking to enhance their data management skills. Applications: With applications in various sectors, from business to research and project management, MS Access is versatile. It facilitates the creation of databases for tasks ranging from contact management to complex systems for inventory and financial analysis.
2	Vertical 1	Skill Enhancement Course (SEC)
3	Type	Practical
4	Credit	2 Credits
5	Hours allotted	60 Hours
6	Marks allotted	50 Marks
7	Course Objectives: 1. Students will grasp essential database concepts, including tables, relationships, and normalization principles. 2. Students will design and construct well-organized databases in MS Access, showcasing proficiency in table design and data validation. 3. Students will master the creation of complex queries in MS Access, enabling them to extract specific information efficiently. 4. Students will develop expertise in crafting user-friendly forms and interfaces in MS Access, optimizing data entry processes. 5. Students will generate comprehensive reports in MS Access, demonstrating skills in grouping, sorting, and presenting data for meaningful analysis.	

8	Learning Outcomes: Student will be able to: LO1: Explain normalization importance, identify table relationships, and justify database design choices. LO2: Create well-structured MS Access databases with proper relationships, data types, and normalization. LO3: Execute advanced queries in MS Access, retrieving specific information based on diverse criteria. LO4: Design intuitive MS Access forms, incorporating controls for an efficient and user-friendly data entry experience. LO5: Produce insightful MS Access reports, organizing and presenting data effectively for analysis.
9	Unit 1: Practical 1: Scenario: You are tasked with creating a student management system using MS Access. - Explore the Access Ribbon and summarize the role of each major tab (Home, Create, External Data, etc.) - Create a new database named StudentSystem.accdb. Add two tables Student and Courses. Each should have five fields with various data types. Add 10-10 entries in each table. Add constraints and relationships to maintain data integrity. - Using the Table Wizard, create an additional table called Instructors. Modify the structure of this table, add an input mask to a phone number field, and create a validation rule for years of experience. Practical 2: - Create and use an Input Mask to enter the data in sample table. - Adding records in table by using Datasheet View, using a Form and using SQL. - Create the Employee Database with necessary table and data and then implement the following transitions: - Delete the record for Kelly Marder. - Change Pamela Milgrom's salary to \$59,500. - Use the Replace command to change all occurrences of "Manager" to "Supervisor". Practical 3: - Create the Bookstore database with necessary table and data and modify the database to accommodate the following: - Add the book Exploring Microsoft Office 2000 Vol II (ISBN: 013-011100-7) by Grauer/Barber, published in 1999 by Prentice Hall, selling for \$45.00. - Change the price of Memory Management for All of Us to \$29.95. - Delete The Presentation Design Book.

- B. Create a table employ with (idno, name, job, age, salary). Insert 10 records. Create a query to display the information of all managers. Create a query to display the names of employs who's salary is >15000.
- C. Use the Form Wizard to create a form, Move and size controls within a form. Use the completed form to enter data into the associated table.

Practical 4:

- A. Add fields to an existing table. Use the Lookup Wizard to create a combo box. Add controls to an existing form to demonstrate inheritance. Add command buttons to a form.
- B. Generate and use various the queries using Query Wizards.
- C. Generate and use various the Query with User Input.
- D. Demonstrate use of Expression Builder.

Practical 5:

- A. Use the report wizard to create a new report. Modify an existing report by adding, deleting, and/or modifying its controls.
- B. Create a query containing a calculated control. Then, create report based on that query. Use the Sorting and Grouping command to add a group header and group footer to a report.
- C. Use action queries to modify a database. Create a crosstab query to display summarized values from a table.

Practical 6:

Scenario: You are designing a database for a company that manages employees and departments. Each department can have multiple employees, but each employee belongs to only one department.

1. Create the following database tables:
 - Departments table with columns: DepartmentID, DepartmentName.
 - Employees table with columns: EmployeeID, FirstName, LastName, and DepartmentID (foreign key referring to the Departments table).
2. Add at least 2 departments and 5 employees. Make sure the employees are assigned to different departments.
3. Write a query to produce a report that lists all employees along with the department they belong to.

Scenario: You are tasked with creating a user profile system for an application where each user has a unique profile. Each profile is associated with exactly one user.

4. Create the following database tables:
5. Users table with columns: UserID, Username, Email.
6. Profiles table with columns: ProfileID, UserID (foreign key referring to the Users table), Bio.
7. Add at least 3 users, each with a corresponding profile.
8. Write a query to produce a report that lists each user's username, email, and bio

(from their profile).

Scenario: You are building a database for a university where students can enroll in multiple courses, and each course can have many students.

9. Create the following database tables:
 - Students table with columns: StudentID, StudentName.
 - Courses table with columns: CourseID, CourseName.
 - Enrollments table (junction table) to manage the many-to-many relationship between students and courses, with columns: StudentID, CourseID.
10. Add at least 3 students, 3 courses, and create enrollment records for students enrolled in courses.
11. Write a query to produce a report that lists each student along with the courses they are enrolled in.

Practical 7:

- A. Demonstrate use of look up tables.
- B. Use the Report Wizard to create a report having the following requirements:
 1. Select the LastName field from the Author table.
 2. Select the Title and Price fields from the Book table.
 3. Select the PubName field from the Publisher table.
 4. View the data by Publisher.
 5. Add a grouping level using LastName.
 6. Sort the report by the Title field in ascending order.
 7. Choose Stepped layout and Portrait orientation.
 8. Type Book List as the report's title.
- C. Define the relationship between two tables and add a subform to a form.

Practical 8:

- A. Import an Access table from an Excel workbook. Create a one- to-many relationship between tables in a database. Create a multiple-table query.
- B. Import external data from the Excel spreadsheet file Bookstore.
 1. Make sure Import the source data into a new table in the current database is selected.
 2. Select the Author worksheet.
 3. Make sure that First Row Contains Column Headings is selected.
 4. For the AuthorID field, set the Data Type option to Long Integer and set the Indexed option to Yes (No Duplicates).
 5. Select Choose my own primary key and make sure the AuthorID field is selected.
 6. Save the table with the name Author.
- C. Export data from access to various formats.

Practical 9:

- A. Relationships: Create and Use Author and Book Table.
1. Create a relationship between the AuthorID field in the Author table and the AuthorCode field in the Book table. Put a checkmark in the box labeled Enforce Referential Integrity.
 2. Create a relationship between the PubID field in the Publisher table and the PubID field in the Book table. Put a checkmark in the box labeled Enforce Referential Integrity.
- B. Create a switchboard; Use the Link Tables command to associate tables in one database with the objects in a different database.
- C. Create an AutoExec and a Close Database macro and demonstrate the use.

Practical 10:

- A. Create the Hospital Management database and perform the following tasks:
1. Retrieve the total number of patients treated by each department.
 2. Generate a report that displays all doctors grouped by their specialization.
 3. Generate a report that displays all patients grouped by their admission date.
 4. Generate a report that displays all patients grouped by their assigned department.
- B. Demonstrate the use of Database Splitter Wizard by splitting database.
- C. Design a form to register a new patient with department and doctor assignment.

10**Scheme of Examination and Assessment Pattern****Paper – 50 Marks****External Examination: Semester End External - 30 marks Time: 2:00 hour****Format of Question Paper**

Question	Based On	Marks
Q1	Unit 1	15
Q2	Unit 2	15
		Total: 30

Note:

- **Certified Journal is compulsory** for appearing at the time of Practical Exam, failing which they will not be allowed to appear for the examination.
- Students are required to perform 75% of the Practicals for the journal to be duly certified. The journal serves as a record of their practical work and is essential component of the evaluation process.

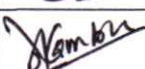
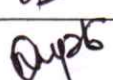
Internal Examination: Continuous Evaluation - 20 marks

	Assessment / Evaluation	Marks
1.	The internal evaluation will be determined by the completion of practical tasks and the submission of corresponding write-ups for each session. Each practical exercise holds a maximum value of 5 marks. The total evaluation, out of 100 marks, should be scaled down to a final score of 10 marks .	10
2.	Viva/ Case Study/ MCQs/ Mini-Projects/ Complete the code block/ Develop the incomplete portion of the code etc.	10
		Total: 20

11**REFERENCES:**

1. Access 2016 in easy steps, by Mike McGrath, In Easy Steps, 1st Edition, 2017
2. Relational Databases and Microsoft Access, by Ron McFadyen, 1st Edition
3. MICROSOFT ACCESS 2019 by David Murray, Kendall Hunt Publishing, 1st Edition, 2020.
4. Step by Step Microsoft Access 2013, by Joyce Cox and Joan Lambert, 1st Edition, Microsoft Press, 2013
5. Access 2019 Bible, by Michael Alexander, Richard Kusleika, Wiley, 1st Edition, 2018
6. Access 2019 For Dummies, by Laurie A. Ulrich, Ken Cook, Wiley, 1st Edition, 2018
7. https://www.quackit.com/microsoft_access/tutorial/
8. https://www.tutorialspoint.com/ms_access/index.htm

Department of B.Sc. (Information Technology):

Sr No	Name of the Faculty	Designation and College	Signature
1.	Mr. Agi Thomas	Assistant Professor, Smt. CHM College, Ulhasnagar	
2.	Dr. Shiji Johnson	Assistant Professor, Smt. CHM College, Ulhasnagar	
3.	Ms. Neha Kambale	Assistant Professor, Smt. CHM College, Ulhasnagar	
4.	Ms. Pooja Gupta	Assistant Professor, Smt. CHM College, Ulhasnagar	

Name & Signature of the Ad-hoc BoS Chairperson:

AGI THOMAS 

Name & Signature of the Dean:

Ms. Ritika Sachdev 



**Smt. Chandibai Himathmal Mansukhani College
(Autonomous)**

**First Year B. Sc.
(AEC- Ability Enhancement Course)**

Semester- I

**Title: Introduction to Communication Skills in
English**

**Vertical - 5
AEC - 2 Credits**

**with effect from
Academic Year 2025-2026**

Title: Introduction to Communication Skills in English

Course Code: CHMSCIAECI

Sr. No.	Heading	Particulars
1	Description of the Course:	Effective communication is the cornerstone of academic and professional success. This course introduces learners to foundational skills in English communication, with a focus on both oral and written competencies essential in academic, social, and workplace contexts. It aims to equip learners with the ability to read critically, write precisely, speak confidently, and listen actively. Emphasis is placed on building clarity, coherence, and conciseness in communication, along with an understanding of audience, purpose, and tone. The course integrates grammar reinforcement, vocabulary building, reading comprehension, and practice-oriented modules such as email etiquette, group discussion, and formal writing. Through dynamic classroom interactions and practical assessments, learners will gain confidence in using English effectively and purposefully.
2	Vertical 5	AEC- Ability Enhancement Course
3	Type	Theory+ Tutorial (Teaching Methods: Lecture/ Discussion/ Presentation/ Reading sessions/ Worksheets/ Listening to audio clips etc.)
4	Credit	2 Credits
5	Hours allotted	30 Hours
6	Marks allotted	50 Marks
7	Course Objectives:	1. To introduce students to the fundamentals of effective communication and its components. 2. To enhance students' reading comprehension through exposure to multiple genres and contexts. 3. To develop grammatical accuracy and lexical resourcefulness for academic and professional communication. 4. To strengthen verbal and non-verbal presentation skills and promote interactive speaking abilities. 5. To build competence in real-world writing tasks such as email drafting, bio-data preparation, and descriptive writing.

Learning Outcomes: Students will be able to

- LO-1:** Understand and apply key principles of effective communication in varied contexts.
- LO-2:** Comprehend and analyze written texts using appropriate reading strategies.
- LO-3:** Recognize and correct common grammatical and lexical errors.
- LO-4:** Engage in clear, confident, and context-appropriate spoken interactions.
- LO-5:** Produce structured, coherent, and grammatically correct written content for academic and workplace use.

Syllabus

UNIT I: Foundations of English Communication

A) Core Concepts of Communication

- Principles of Effective Communication: The 7 Cs
- Verbal and Non-verbal Communication with Examples
- Cross-cultural Communication in the Globalized World
- Technology in Communication: Email, Messaging, Video Conferencing
- Listening for Detail and Intent: Barriers to Listening and Strategies

B) Reading Comprehension

- Understanding the Main Idea and Supporting Details
 - Interpreting Tone, Purpose, and Bias
 - Using Context Clues for Vocabulary Building
 - Reading Visual Texts: Graphs, Charts, and Infographics
- Sample readings will include excerpts from news articles, reports, editorials, and educational essays (200-250 words).*

C) Grammar and Vocabulary

- Subject-Verb Agreement
- Sentence Structures
- Punctuation and Capitalization
- Commonly Confused Words
- Editing and Proofreading Practice

A remedial and functional approach will be followed with contextual exercises.

UNIT II: Applied Communication Skills

A) Speaking and Listening Skills

- Introducing Oneself in Academic/Professional Settings
- Participating in Group Discussions and Expressing Opinions
- Delivering a Short Speech (2-3 minutes) on Familiar Topics
- Understanding and Responding to Instructions
- Listening Comprehension Practice through Audio/Video Clips

B) Functional Writing Skills

- Formal Email Writing with Subject and Tone Sensitivity
- Descriptive Paragraph Writing (People, Places, Processes)
- Bio-data and Resume Writing
- Drafting Job Applications (Solicited and Unsolicited)
- Writing a Statement of Purpose

10

Scheme of Examination and Assessment Pattern**Paper – 50 Marks****External Examination: Semester End External - 30 marks Time: 1:00 hour****Format of Question Paper**

Question No	Nature of Questions	Marks
Q. 1	Short Notes (2 out of 4) Unit – I (A) - Principles and Types of Communication	10
Q. 2 (A)	Reading Comprehension – Unseen Passage (200–250 words) Unit –I (B)	06
Q. 2 (B)	Grammar – Error Correction, Transformation of Sentences (Unit- I - C)	04
Q. 3	Formal Writing Task (1 out of 2 choices) – Email, Resume, SoP, etc. (Unit – II -B)	10
Total		30

Internal Examination: Continuous Evaluation - 20 marks

	Assessment / evaluation	Marks
1.	Activity-Based Assessment – Presentation or Conversation Skills: Individual or group task based on Unit 2(A). Scheduled and assessed during regular class hours.	05
2.	Participation in One Additional Classroom Activity: Activity may include listening to audio clips, reading aloud, group discussion, summarizing, or vocabulary building.	05
3.	Attendance and Overall Engagement: Attendance as per institutional norms, along with active participation in class discussions and tasks.	05
4.	Short Writing Task (Descriptive Paragraph, Email, or SOP extract): Based on Unit 2(B); to be completed as a classroom assignment or home submission	05
Total		20

11

REFERENCES:

1. Adler, Ronald B., et al. *Understanding Human Communication*. 15th ed., Oxford UP, 2021.
2. Bailey, Stephen. *Academic Writing: A Handbook for International Students*. 5th ed., Routledge, 2018.

3. Barrass, Robert. *Students Must Write: A Guide to Better Writing in Coursework and Examinations*. Routledge, 2005.
4. Brown, Gillian, and George Yule. *Teaching the Spoken Language: An Approach Based on the Analysis of Conversational English*. Cambridge UP, 1983.
5. Carnegie, Dale. *The Quick and Easy Way to Effective Speaking*. Pocket Books, 2006.
6. Chaney, Lillian, and Jeanette Martin. *Intercultural Business Communication*. 6th ed., Pearson, 2014.
7. Cullen, Pauline, et al. *English Grammar in Use Supplementary Exercises*. Cambridge UP, 2019.
8. Eastwood, John. *Oxford Guide to English Grammar*. Oxford UP, 2005.
9. Gerson, Sharon J., and Steven M. Gerson. *Technical Communication: Process and Product*. 9th ed., Pearson, 2021.
10. Hewings, Martin. *Advanced Grammar in Use: A Self-study Reference and Practice Book for Advanced Learners of English*. 3rd ed., Cambridge UP, 2013.
11. Jones, Leo. *Functions of English: Communication Practice in English*. Cambridge UP, 1981.
12. Kumar, Sanjay, and Pushp Lata. *Communication Skills*. 2nd ed., Oxford UP, 2018.
13. Lynch, Tony. *Listening in Language Learning*. Longman, 1988.
14. McCarthy, Michael, and Felicity O'Dell. *Academic Vocabulary in Use*. Cambridge UP, 2008.
15. Nordquist, Richard. *The Essentials of English Grammar*. McGraw-Hill Education, 2016.
16. Quirk, Randolph, et al. *A Comprehensive Grammar of the English Language*. Longman, 1985.
17. Seely, John. *The Oxford Guide to Writing and Speaking*. Oxford UP, 2005.
18. Straus, Jane, et al. *The Blue Book of Grammar and Punctuation*. 12th ed., Jossey-Bass, 2021.
19. Wallace, Catherine. *Reading*. Oxford UP, 1992.
20. Zinsser, William. *On Writing Well: The Classic Guide to Writing Nonfiction*. Harper Perennial, 2016.

Department of English:

Sr. No	Name of the Faculty	Designation and College	Signature
1.	Prof. (Dr.) Pratima Das	Head & Professor, Dept. of English, Smt. CHM College	<i>Pratima Das</i>
2.	Prof. (Dr.) Kailas Aute	Professor, Dept. of English, Smt. CHM College	<i>B. Aute</i>
3.	Mr. Ananda Pandhare	Asst. Professor, Dept. of English, Smt. CHM College	<i>A. Pandhare</i>
4.	Ms. Sana Karale	Asst. Professor, Dept. of English, Smt. CHM College	<i>S. Karale</i>

Name & Signature of the Ad hoc BoS Chairperson: Prof. (Dr). Pratima Das *Pratima Das*

Name & Signature of the Dean: Prof. (Dr). Pratima Das *Pratima Das*



**Smt. Chandibai Himathmal Mansukhani College
(Autonomous)**

First Year

Semester- I

Title: Communication Skills in Sindhi

Vertical - 5

Ability Enhancement Course - 2 Credits

**with effect from
Academic Year 2025-2026**

Title: Communication Skills in Sindhi
COURSE CODE: CHMSINAEI

Sr. No.	Heading	Particulars
1	Description the Course:	Sindhi communication skills (B.Com.) Communication is the core component of the commerce and trade. In communication, language plays very significant role. If a student has mastered the skills of language, undoubtedly, he or she would be able to communicate in the best manner. In this course basic part of Sindhi language would be taught based on the NEP 2020. The innovative approach likes critical thinking, creative mind, use of technology will lead to communicating and participating with the different groups. The vocabulary section would be given prominence. The course would be in the Devanagari script so that it can attract majority of the students. Even non-Sindhi students shall have opportunity to adopt this course.
2	Vertical 1	AEC – Ability Enhancement Course
3	Type	Theory+ Practicum (Teaching Method: Lecture/ Discussion/Reading)
4	Credit	2 credits (1 credit = 15 hours for theory or 30 hours of Practical work in a semester)
5	Hours allotted	30 Hours
6	Marks allotted	50Marks (50 Marks each)
7	Course Objectives: After successful completion of this course: 1. The learner will get understanding of communication skills. 2. The learner will understand how to accurate the pronunciation of special words in Sindhi 3. The learner will improve the conversation skill in Sindhi. 4. The learner will become best communicator in Sindhi language	
8	Learning Outcomes: Student will be able to LO1: Know the basic special features of Sindhi language. LO2: Understand the skills of communication. LO3: Knowing the conversation with businessmen and customers LO4: Know the etiquettes with parents, relatives, friends and others in effective way	

Unit I – Fundamental of Sindhi Communication

- Introduction of Communication skill through Pictorial Presentation
- Importance of Language
- Basic aspects of language
 - i) Types of Language, ii) Role of Language, iii) Changes in Language
 - iv) Non-violent aspects of language v) Language & New generation
 - vi) Language & Modern Technology
- New Education Policy (NEP) & Importance of language
- Sindhi language: (Special features of spoken Sindhi language with pronunciation through audio visual presentation)

Unit II – Functional Communication

- Importance of Communication
- Types of Communication (Presentation through video clips)
 - i) Verbal, ii) Non-verbal, iii) Written iv) Digital Communication
- Characteristics of Communication
- Obstacles in Communication of Sindhi Language
- Methods of Best Communication through role plays
- Spoken Sindhi in Business
- Conversation with customers and proprietors

यूनिट – 1

- स्मचारी भाषा : वाक्फियत
- भाषा जी अहमियत
- भाषा जा बुनियादी पहलू
 - i) किस्म, ii) भाषा जो किरदार, iii) भाषा मे तबदीलियूं iv) भाषा जा अहिसासाती पहलू v) भाषा ऐं नई नसल
- नई तैलीमी नीति ऐं बोलियुन जी अहमियत
- असां जी सिंधी बोली

यूनिट – 2

- राबते जी अहमियत
- राबते जा किस्म
 - i) जिवानी राबतो, ii) गैर जिवानी राबतो, iii) लिखत राबतो iv) डिजीटल राबतो
- राबते मां फायदा
- राबते में रंडकूं
- बेहतर राबते जा तरीका
- ग्राहकन सां सिंधी बोलीअ मे गुप्तगू

10

Scheme of Examination and Assessment Pattern

Paper – 50 Marks

External Examination: Semester End External - 30 marks Time: 1:00 hour

Format of Question Paper

Attempt any 4 out of 6 questions.

Question No	Nature of Questions	Marks
Q1.	Objective Type – Fill in the Blanks / MCQs (Unit I0	15
Q2.	Question on reading skill (Unit II)	07
Q3.	Writing short story from outlines (Unit II)	08
		Total 30

Note:

1. Equal Weightage is to be given to all the modules.
2. Use of non-programmable scientific calculator is allowed in the examination.

Internal Examination: Continuous Evolution - 20 marks

	Assessment / evaluation	Marks
1.	Speaking Activities: (Presentation) Making presentations in the classroom	10
2.	Listening Activities: (Assignment) Listening to speeches, dialogues, announcement and summarizing them	10
Total		20

11

REFERENCE BOOKS:

1. Sanchari Basha – By Dr. Pushpa Kodwani
2. Sindhi Pahakaa – Dr. Jetly M.K.
3. Sindhi Muhavahra – By Hardwani Lachhman
4. Sindhi Adhyat mak Shabdhkesh – By Hardwani Lachhman
5. Acho Sindhi Sikhu – By Hardwani Lachhman

Syllabus Committee:

Sr No	Name of the Faculty	Designation and College	Signature
1.	Mrs. Kajal Ramchandani	H.O.D. of Jai Hind College	<i>Kajal</i>
2.	Mrs. Komal Totani	Assistant Teacher, Smt. CHM College	<i>Pratima</i>

Name & Signature of the BoS Chairperson: (Mrs. Kajal Ramchandani) *Kajal*

Name & Signature of the Dean: (Dr. Pratima Das) *Pratima Das*



**Smt. Chandibai Himathmal Mansukhani College
(Autonomous)**

First Year

Semester- I

**Title: Environmental Management and
Sustainable Development-I**

**Vertical - 5
VEC- 2 Credits**

**with effect from
Academic Year 2025-2026**

Title: Environmental Management and Sustainable Development-I**Course Code: CHMVECI**

Sr. No.	Heading	Particulars
1	Description of the Course:	This course introduces students to the basics of environmental management and sustainable development. It explains how ecosystems work, the importance of biodiversity, and the need to protect our natural resources. Students will learn about different environmental problems, human impact on nature, and how to manage disasters. The course also covers Indian environmental movements, ethics, and the role of public awareness. Real-life examples and case studies help students understand the connection between nature and human communities in a simple and practical way.
2	Vertical 5	VEC
3	Type & Teaching methods	Theory + Practicum Lecture/Discussion/Presentation/Case study,etc
4	Credits	2 Credits
5	Hours allotted	30 Hours
6	Marks allotted	50 Marks
7	Course Objectives: 1. To introduce about ecosystems, biodiversity and to make aware for the need of conservation. 2. To sensitize students towards environmental concerns, issues, and impacts of human population. 3. To analyze the impact of human population growth and development activities on the environment, including issues related to displacement, disaster response, and rehabilitation. 4. To foster awareness of environmental ethics and the role of cultural and social movements in shaping sustainable environmental practices through communication, policy, and activism.	
8	Learning Outcomes: Students will be able to LO1: Explain the interrelationships within ecosystems and analyze energy flow and succession, using examples from various ecological zones. LO2: Critically evaluate biodiversity levels and conservation strategies, applying knowledge of endemic species, threats, and ecological services to real-world scenarios. LO3: Assess the socio-environmental implications of population growth, displacement, and disasters, incorporating case studies to understand sustainable development challenges.	

	LO4: Demonstrate an understanding of environmental ethics and advocacy, by interpreting the influence of cultural values, environmental movements, and communication strategies on sustainability.									
9	Syllabus UNIT I: Ecosystems, Biodiversity and Conservation • Introduction, structure, and function of ecosystems; Energy flow: food chains, food webs and ecological succession. Case studies of the following: a) Forest ecosystem b) Grassland ecosystem c) Desert ecosystem d) Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries) • Levels of biological diversity: genetic, species and ecosystem diversity; Biogeographic zones of India; Biodiversity patterns • India as a mega-biodiversity nation; Endangered and endemic species of India • Threats to biodiversity: Habitat loss, poaching of wildlife, man-wildlife conflicts, biological invasions; Conservation of biodiversity: In-situ and Ex-situ conservation of biodiversity. • Ecosystem and biodiversity services: Ecological, economic, social, ethical, aesthetic and Informational value UNIT II: Human Communities and the Environment • Human population growth: Impacts on environment, human health and welfare. • Resettlement and rehabilitation of project affected persons; case studies. • Disaster management: floods, earthquake, cyclones and landslides. • Environmental movements: Chipko, Silent valley, Bishnois of Rajasthan. • Environmental ethics: Role of Indian and other religions and cultures in environmental conservation. • Environmental communication and public awareness, case studies (e.g. CNG vehicles in Delhi).									
10	Assessment Pattern Scheme of Examination and Assessment Pattern Paper – 50 Marks External Examination: Semester End External - 30 marks Time: 1:00 hours Format of Question Paper Attempt any 3 out of 4 questions. <table><tr><th>Question No.</th><th>Nature of Questions</th><th>Marks</th></tr><tr><td>Q.1</td><td>Theory based on Unit I</td><td>10</td></tr><tr><td>Q.2</td><td>Theory based on Unit I</td><td>10</td></tr></table>	Question No.	Nature of Questions	Marks	Q.1	Theory based on Unit I	10	Q.2	Theory based on Unit I	10
Question No.	Nature of Questions	Marks								
Q.1	Theory based on Unit I	10								
Q.2	Theory based on Unit I	10								

Q.3	Theory based on Unit II	10
Q.4	Theory based on Unit II	10
		Total 30

Internal Examination: Continuous Evaluation - 20 marks

	Assessment / evaluation	Marks
1.	Class Test, Creative writing/visits/role play (Short notes/ MCQ's/ Match the Pairs/ Answer in one sentence/ Quiz)	10
2.	Project /Presentation / Viva/Group Discussion/Case study	10
		Total 20

11

REFERENCES :

1. Carson, R. 2002. Silent Spring. Houghton Mifflin Harcourt.
2. Gadgil, M., & Guha, R. 1993. This Fissured Land: An Ecological History of India. Univ. of California Press.
3. Gleeson, B. and Low, N. (eds.) 1999. Global Ethics and Environment, London, Routledge.
4. Gleick, P. H. 1993. Water in Crisis. Pacific Institute for Studies in Dev., Environment & Security. Stockholm Env. Institute, Oxford Univ. Press.
5. Sodhi, N.S., Gibson, L. & Raven, P.H. (eds). 2013. Conservation Biology: Voices from the Tropics. John Wiley & Sons.
6. Thapar, V. 1998. Land of the Tiger: A Natural History of the Indian Subcontinent.
7. Warren, C. E. 1971. Biology and Water Pollution Control. WB Saunders.
8. Wilson, E. O. 2006. The Creation: An appeal to save life on earth. New York: Norton.
9. Harper, Charles L. (2017) Environment and Society, Human Perspectives on Environmental Issues 6th Edition. Routledge.
10. Rajagopalan, R. (2011). Environmental Studies: From Crisis to Cure. India: Oxford University Press.
11. Harris, Frances (2012) Global Environmental Issues, 2nd Edition. Wiley- Blackwell.

Name & Signature of the Dean & Ad-hoc BoS Chairperson (Interdisciplinary):

[Signature]
Dr. Nitin Arekar



**Smt. Chandibai Himathmal Mansukhani College
(Autonomous)**

First Year

Semester- I

Title: Indian Knowledge System

**Vertical - 5
IKS Subject - 2 Credits**

**with effect from
Academic Year 2025-2026**

Title: Indian Knowledge System

Course Code:CHMIKSI

Sr. No.	Heading	Particulars
1	Description of the Course:	This course introduces students to the Indian Knowledge System (IKS), emphasizing its historical depth, cultural relevance, and interdisciplinary value. Rooted in the context of Indian civilization, it explores the holistic development of knowledge from ancient to pre-modern times, including contributions in medicine, mathematics, logic, linguistics, governance, arts, and sciences. By revisiting the traditional education systems and intellectual heritage of India, the course encourages learners to connect ancient insights with contemporary disciplines. It aims to enhance awareness, foster appreciation of indigenous wisdom, and reveal the interconnectedness of various streams of knowledge, aligning with the goals of the NEP 2020.
2	Vertical 5	IKS
3	Type	Theory+ Practicum (Teaching Methods: Lecture/ Discussion/ Presentation etc.)
4	Credit	2 Credits
5	Hours allotted	30 Hours
6	Marks allotted	50 Marks
7	Course Objectives: 1. To sensitize the students about context in which they are embedded i.e. Indian culture and civilization including its Knowledge System and Tradition. 2. To help student to understand the knowledge, art and creative practices, skills and values in ancient Indian system. 3. To help to study the enriched scientific Indian heritage. 4. To introduce the contribution from Ancient Indian system & tradition to modern science & Technology	
8	Learning Outcomes: Students will be able to LO1: Understand and appreciate the rich Indian Knowledge Tradition LO2: Understand the contribution of Indians in various fields LO3: Experience increase subject-awareness and self-esteem LO4: Develop a comprehensive understanding of how all knowledge is ultimately intertwined	

Syllabus

UNIT I: Introduction

- Introduction to IKS (What is knowledge System, Characteristic Features of Indian Knowledge System)
- Why IKS? (Macaulay's Education Policy and its impact, Need of revisiting Ancient Indian Traditions)
- Scope of IKS (The Universality of IKS (from Micro to Macro), development form Earliest times to 18th Century CE)
- Tradition of IKS (Ancient Indian Education System: Home, Gurukul, Pathashala, Universities and ancient educational centres)
- Relevant sites in the vicinity of the Institute (Water Management System at Kanheri, Temple Management of Ambarnath, etc.)

UNIT II:

- Medicine (Ayurveda)
- Alchemy
- Mathematics
- Logic
- Art of Governance (Arthashastra)

UNIT III: (Select Any FIVE out of the following)

- Aesthetics
- Town Planning
- Strategic Studies
- Krishi Shastra
- Vyakaran & Lexicography
- Natyashastra
- Ancient Sports
- Astronomy
- Yoga and Wellbeing
- Linguistics
- Chitrasutra
- Architecture
- Taxation
- Banking
- Trade and Commerce

Scheme of Examination and Assessment Pattern

Paper – 50 Marks

External Examination: Semester End External - 30 marks Time: 1:00 hours

Format of Question Paper

Question No	Nature of Questions	Marks
Q1	Attempt any TWO Questions out of FIVE.	06
Q2	Attempt any THREE Questions out of FIVE	12
Q3	Attempt any THREE Questions out of FIFTEEN	12
		Total 30

Internal Examination: Continuous Evaluation - 20 marks

	Assessment / evaluation	Marks
1.	Class Test during the lectures (Short notes/ MCQ's/ Match the Pairs/ Answer in one sentence/ Puzzles).	10
2	Participation in Workshop/ Conference/Seminar/ Case Study/Field Visit/ Certificate Course/Project presentation /viva .	10
		Total 20

REFERENCES:

1. Concise history of science in India- D.M. Bose, S.N Sen, B.V. Subbarayappa.
2. Positive sciences of the Ancient Hindus- Brajendranatha seal, Motilal Banarasidas, Delhi 1958
3. History of Chemistry in Ancient India & Medieval India, P.Ray- Indian Chemicals Society, Calcutta 1956.
4. Charaka Samhita- a scientific synopsis, P. Ray & H.N Gupta National Institute of Sciences of India New Delhi 1965.
5. MacDonnell A.A- History of Sanskrit literature
6. Winternitz M- History of Indian Literature Vol. I, II
7. Dasgupta S.N & De S.K- History of Sanskrit literature Vol' I'
8. Ramkrishna Mission- cultural heritage of India Vol' I, II
9. Majumdar R. C & Pushalkar A.D- History & culture of the Indian people, Vol. I, II & III.
10. Keith A.B- History of Sanskrit literature'

Name & Signature of the Dean & Adhoc BoS Chairperson(Interdisciplinary):

(Dr. Nitin Arekar)



**Smt. Chandibai Himathmal Mansukhani College
(Autonomous)**

First Year

Semester- I

Title: Cocurricular Course I

**Vertical - 6
Cocurricular Course - 2 Credits**

**with effect from
Academic Year 2025-2026**

Title: Cocurricular Course - I

Course Code: CHMCCI6

Sr. No.	Heading	Particulars
1	Description the Course:	This student-friendly Co-Curricular Course is uniquely designed to promote holistic development through active participation in various college-based activities. Unlike traditional theory-based subjects, this course emphasizes hands-on involvement and experiential learning. Students are encouraged to explore their interests and talents by engaging in cultural, social, literary, sports, extension, or club-based events conducted by the college throughout the academic year. Participation will be recorded and assessed based on involvement, initiative, team spirit, creativity, and consistency. The aim is to nurture essential life skills such as leadership, communication, collaboration, and responsibility in a supportive, informal setting. This non-theory course offers students the opportunities and the freedom to learn beyond the classroom and grow into well-rounded individuals, contributing positively to campus life and society.
2	Vertical 6	Cocurricular Course (Mandatory)
3	Type Teaching Methods	Non Theory Participation, Report Writing, Presentation etc.
4	Credit	2 Credits
5	Hours allotted	30 Hours
6	Marks allotted	50 Marks
7	Course Objectives: 1. To inculcate a spirit of active participation in cultural, social, environmental, and creative activities. 2. To enhance personal and interpersonal skills through real-life experiences and teamwork. 3. To foster a sense of responsibility, leadership, and community engagement among students. 4. To develop self-confidence and emotional well-being through creative expression and collaboration. 5. To integrate classroom learning with experiential learning for holistic growth.	
8	Learning Outcomes: By the end of the course, students will be able to: LO1: Participate meaningfully in diverse co-curricular activities and reflect on their learning experiences. LO2: Demonstrate improved communication, leadership, and teamwork skills. LO3: Exhibit increased awareness of social responsibility and civic engagement. LO4: Build confidence through creative, cultural, and intellectual expressions. LO5: Maintain a portfolio or activity log to track participation and personal development.	

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Syllabus

Unit I - Suggested Areas of Participation in the activities:

- **Cultural Events:** Drama, dance, music, literary events, debates, etc.
- **Social Outreach:** Blood donation, awareness campaigns, cleanliness drives.
- **Clubs & Societies:** Photography, quiz, environment club, shram club, etc.
- **Sports & Fitness:** College tournaments, yoga, marathons, fitness challenges.
- **Institutional Events:** Foundation Day, Annual Day, College Festivals, Intercollegiate events.
- **National Festivals:** Independence Day, Republic Day etc.

Unit II - Program Specific Topics

- **Workshops/Seminars:** Report Writing, Personality Development, Soft Skills, Leadership Talks.
- **Speak, Show, Shine:** Presentation / Poster Presentation / Viva and Learning Experience

Mode of Evaluation:

- **Faculty Coordinator:** To guide and evaluate student progress.
- **Participation Proof:** Certificates, photos, attendance records.
- **Reflective Journal:** Minimum 2–3 pages summarizing experiences, learning, and growth.
- **Final Viva/Presentation:** 5-minute talk on poster presentation and on overall learning.

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Scheme of Examination and Assessment Pattern

Based on 3 approved Activities

Semester End External - 30 marks

Activity No	Nature of Activities	Marks
1.	Title of Approved Activity - 1	10
2.	Title of Approved Activity - 2	10
3.	Title of Approved Activity - 3	10
	Total	30

Internal Examination: Continuous Evaluation – 20 marks

	Assessment / Evaluation	Marks
1.	Reflective journal	10
2.	Presentation/ poster presentation/viva	10
	Total	20

Suggested Readings:

- How to Win Friends and Influence People
- The 7 Habits of Highly Effective People
- Thinking, Fast and Slow
- Leaders Eat Last
- Talk Like Ted

Name & Signature of the Principal & Chairperson, Academic Council:


Dr. Manju Lalwani Pathak