MES GARWARE COLLEGE OF COMMERCE (AUTONOMOUS)

BBA-CA Programme (Autonomous)

Under the Guidelines of NEP 2020 and AICT

AY 2024-25

FY BBA(CA) – Semester – I		
Course Code: 23BA1-A011	**Subject: Basic 'C' Language**	**Marks: 100 Credits: 4**

Course Objectives:

- To understand step-by-step analysis of the process of programming logic.
- To know the basic properties and syntax of C programming language.
- To understand input and output operation in C..
- To understand all decision making statements in C Language.
- To understand concept of array and string in C Language

Course Outcome:

After completing the course, the student shall be able to

CO1: Ability to visualize the representation the input, output, decisions, and calculations that take place within a program.

CO2: Understand the history, operators and data types of C Language.

CO3: Basic knowledge of input, output operations and practical implementation in coding.

CO4: Practical knowledge of if-else statement and loops used in C Language.

CO5: Practical implementation of arrays, string and storage classes in c language and build programming skills.

Unit	Unit Title	Contents	No. of Lectures + CCE
I	**Algorithm and Flowchart**	1.1 Concept: Problem, Algorithm. 1.2 Characteristics of an algorithm. 1.3 Examples 1.3.1 Addition / Multiplication of integers 1.3.2 Determining if a number is +ve / -ve , even / odd 1.3.3 Maximum of 2 numbers , 3 numbers 1.3.4 Sum of first n numbers, sum of given n numbers , Sum of digits of a given number, sum of first and last digit of a Number. 1.4 Introduction of flow chart 1.5 Symbols of flowchart 1.6 Draw flowcharts for algorithms implemented in	10
II	**Introduction to C language**	2.1 History 2.2 Basic structure of C Programming 2.3 Language fundamentals 2.3.1 Character set, tokens 2.3.2 Keywords and identifiers 2.3.3 Variables and data types 2.4 Operators 2.4.1 Types of operators 2.4.2 Precedence and associativity 2.4.3 Expression	10
III	**Managing I/O operations**	3.1 Console based I/O and related built-in I/O functions 3.1.1 printf(), scanf() 3.1.2 getch(), getchar() 3.1.3 putch() and putchar() 3.1.4 sscanf() and sprintf()	7
IV	**Decision Making and looping**	4.1 Introduction 4.2 Decision making structure 4.2.1 If statement 4.2.2 If-else statement 4.2.3 Nested if-else statement	13

		4.2.4 Conditional operator
		4.2.5 Switch statement
		  4.3 Loop control structures
		4.3.1 while loop
		4.3.2 Do-while loop
		4.3.3 For loop
		4.3.4 Nested for loop
		  4.4 Jump statements
		4.4.1 break
		4.4.2 continue
		4.4.3 goto
		4.4.4 exit	

V	**Arrays and Strings**	5.1 Introduction to one-dimensional Array
		     5.1.1 Definition
		     5.1.2 Declaration
		     5.1.3 Initialization
		5.2 Introduction to two-dimensional Array
		     5.2.1 Definition
		     5.2.2 Declaration
		5.2.3 Initialization
		
		5.3 Introductions to Strings
		     5.3.1 Definition
		     5.3.2 Declaration
		     5.3.3 Initialization
		5.4 Standard library functions
			10

Total No of Lectures+ Evaluation (50+10)			**60 Hours**

Unit	Unit Title	Suggestive teaching methodology	Practical	Outcome expected		Weightage of Marks (%)
				Conceptual understanding Knowledge/Skills/Attributes etc.		
I	**Algorithm and Flowchart**	Lecture - Demonstration and Practical Implementation in Laboratory	practical	To understand concepts of algorithm,flow chart & logical thinking using different symbols.	critical thinking and problem solving skills	20%
II	**Introduction to C language**	Lecture - Demonstration and Practical Implementation in Laboratory	practical	To understand Keywords, operators, data types and identifiers etc.	Information Literacy,critical thinking,problem solving ,analytical reasoning	20%
III	**Managing I/O operations**	Lecture - Demonstration and Practical Implementation in Laboratory	practical	To understand basic input output operations and its practical implementation in C language.	Critical thinking,problem solving ,analytical reasoning,Life long Learning,Application Skills	10%
IV	**Decision Making and looping**	Lecture - Demonstration and Practical Implementation in Laboratory	practical	To understand basic knowledge of if-else statements and loops used in programming. To understand practical implementation of loops and decision making statements.	Critical thinking,problem solving ,analytical reasoning,Life long Learning,Experimental Learning	25%

| V | **Arrays and Strings** | Lecture - Demonstration and Practical Implementation in Laboratory | practical | To understand concept of Array,String and its practical implementation. | Critical thinking,Problem solving ,Analytical reasoning,Life long Learning,Experim ental Learning | 25% |

Evaluation Method:

Unit	Evaluation Method	Marks (100)			Project/Practical (If any)
		Formative Assessment		**Summative Assessment**	
		CCE I (20)	**CCE II (20)**	**SEMESTER (60)**	
1	Test and lab course work	Assignment	Examination		Practical in Computer Laboratory
2	Assignment and Quiz	Assignment	Examination		Practical in Computer Laboratory
3	Test and Lab course work	Assignment	Examination		Practical in Computer Laboratory
4	Test, Quiz or Lab course work .	Assignment	Examination		Practical in Computer Laboratory
5	Assignment and Quiz	Assignment	Examination		Practical in Computer Laboratory

Suggested Books:

Sr. No.	Name of Book	Author	Publication	Edition	Place
1	Let us C	YashwantKanetkar	BPB publication.	Sixteenth	New Delhi
2	Ansi C	Balagurusamy	McGraw Hill Education (India)	Third	New Delhi

| 3 | The complete Reference | HerbeltSchildt | McGraw Hill Education (India) | Fourth | New Delhi |

Suggested Web/E-Learning Resources

Sr. No.	Topic of the course	Lectures (Available on Youtube/ Swayam/ MOOCS etc.)	Link	Journals/Articles/ Case studies
1	C Programming	Swayam	https://onlinecourses.npt el.ac.in/noc21_cs81/prev iew	online course
2	Problem Solving through programming in C	Swayam	https://onlinecourses.npt el.ac.in/noc21_cs54/prev iew	online course
3	C Programming: Getting Started	edX	https://www.edx.org/cou rse/c-programming- getting-started	online course

FY BBA(CA) – Semester – I

Course Code: 23BA1-A021	Subject: Database Management System	Marks: 50 Credits: 2

Course Objectives:

- To know the basic database concepts, applications, data models, schemas and instances.
- To understand the basics of data storage, data manipulation and data retrieval
- To familiarize with the concept of Relational Database Management system.

Course Outcome:

After completing the course, the student shall be able to

CO1: Apply the basic concepts of Database Systems and Applications.

CO2: Understand to implement the E R model and relational model

CO3: Learn to apply various Normalization techniques to use Relational Database Management System.

Unit	Unit Title	Contents	No. of Lectures + CCE
I	**File Structure and Organization**	**File Structure and Organization** 1.1 Introduction 1.2 Logical and Physical Files 1.2.1 File 1.2.2 File Structure 1.2.3 Logical and Physical Files Definitions 1.3 Basic File Operations 1.3.1 Opening Files 1.3.2 Reading and Writing 1.3.3 Seeking 1.3.4 Closing Files 1.4 File Organization 1.4.1 Field and Record structure in file 1.4.2 Record Types 1.4.3 Types of file organization 1.4.3.1 Sequential 1.4.3.2 Indexed 1.4.3.3 Hashed 1.5 Indexing 1.5.1 What is an Index? 1.5.2 When to use Indexes? 1.5.3 Types of Index 1.5.3.1 Dense Index 1.5.3.2 Sparse Index	6
II	**Database Management System**	**Database Management System** 2.1 Introduction 2.2 Basic Concept and Definitions 2.2.1 Data and Information 2.2.2 Data Vs Information 2.2.3 Data Dictionary 2.2.4 Data Item or Field 2.2.5 Record 2.3 Definition of DBMS 2.4 Applications of DBMS 2.5 File processing system Vs DBMS 2.6 Advantages and Disadvantages of DBMS 2.7 Users of DBMS 2.7.1 Database Designers 2.7.2 Application programmer 2.7.3 Sophisticated Users 2.7.4 End Users 2.8 Views of Data 2.9 Data Models 2.10 Entity Relationship Diagram(ERD)	14

		2.11 Conversion of ERD into table design 2.12 Extended features of ERD	
III	**Relational Database Design**	**Relational Database Design** 3.1 Introduction 3.2 Anomalies of un normalized database 3.3 Normalization and Functional dependency 3.4 Normal Form 3.4.1 1 NF 3.4.2 2 NF 3.4.3 3 NF 3.4.3.4 BCNF	10
Teaching lectures			**25**
Continuous Evaluation (CCE)			**5**
Total No of Lectures			**30**

Unit	Unit Title	Suggestive teaching methodology	Project (If any)	Outcome expected		Weightage of Marks (%)
				Conceptual understanding Knowledge/Skills/Attributes etc.		
I	**File Structure and Organizatio n**	Lecture - Demonstration and Practical Implementation in Laboratory	practical	1. To understand basic concept of Data 2. Conceptual understanding of file structure, file organization, Indexes and types of indexes		30%
II	**Database Managemen t System**	Lecture - Demonstration and Practical Implementation in Laboratory	practical	1. To understand concept of Data and Information 2. To learn concept of DBMS 3. Conceptual understanding of Uses and application of DBMS 4. To learn different Data Models		35%
III	**Relational Databa se Design**	Lecture - Demonstration and Practical Implementation in Laboratory	practical	1. To learn Relational Database Design in detail 2. To understand Normalisation 3. To convert database into normalized format using		35%

				1NF , 2NF , 3NF and BCNF		

Suggested Books:

Unit	Evaluation Method	Marks (50)			Project/Practical (If any)
		Formative Assessment		Summative Assessment	
		CCE I (10)	CCE II (10)	SEMESTER (30)	
1	Test on File Structure and Organization	MCQ	Assignment		Practical in Computer Laboratory
2	Assignment and Case study on Database Management System	MCQ	Assignment		Practical in Computer Laboratory
3	Assignment and Case study Relational Database Design	MCQ	Assignment		Practical in Computer Laboratory

Sr. No.	Name of Book	Author	Publication
1	Database System Concepts	By Henry korth and A.	Silberschatz
2	SQL, PL/SQL The Programming Language Oracle	Ivan Bayross,	BPB Publication.
3	Database Systems Concepts, Designs and Application	Shio Kumar Singh,	Pearson
4	Introduction to SQL	Reck F. van der Lans	Pearson
5	Modern Database Management	Jeffery A Hoffer , V.Ramesh, Heikki Topi	Pearson
6	Database M anagement Systems	Debabrata Sahoo	Tata MacgrawHill

FY BBA(CA) – Semester – I		
Course Code: 23BA1-C031	**Subject: SQL (Structured Query Language)**	**Marks: 50 Credits: 2**

Course Objectives:

- To familiarize with the concept of Relational Database Management system.
- To learn the basic database concepts, SQL Commands database creation
- To learn the advance SQL queries using difference operators.

Course Outcome:

After completing the course, the student shall be able to

CO1: Apply the basic concepts of Database Systems and Applications.

CO2 : Build a simple database system using different DML, DQL, DDL commands in SQL

CO3: Learn to apply advance SQL commands

Unit	Unit Title	Contents	No. of Lectures + CCE
I	**Relational Model**	**Relational Model** 1.1 Introduction 1.2 Terms a. Relation b. Tuple c. Attribute d. Cardinality e. Degree of relationship set f. Domain 1.3 Keys 3.3.1 Super Key 3.3.2 Candidate Key 3.3.3 Primary Key 3.3.4 Foreign Key 1.4 Relational Algebra Operations a. Select b. Project c. Union d. Difference e. Intersection f. Cartesian Product g. Natural Join	10
II	**Basics of SQL (Structured Query Language)**	**Basic of SQL (Structured Query Language)** 2.1 Introduction 2.2 History Of SQL 2.3 Basic Structure 2.4 DDL , DML, DQL , DCL commands - • Structure – creation, alteration, dropping , listing of tables • Insertion of Data, updating and deleting of Data • Defining constraints – Primary key, foreign key, unique, not null, check • Functions - aggregate functions • Built-in functions – numeric, date, string functions • Set operations	10

		Advanced SQL (Structured Query Language)		10
II	**Advanced SQL (Structured Query Language)**	• Simple queries, Sub-queries, Nested queries • Use of group by, having and order by, • Use of Joins and its types • Transaction control commands – Commit, Rollback, Save point. (Students can use oracle SQL software for practices and Practical)		
Teaching lectures				**20**
Continuous Evaluation (CCE)				**10**
Total No of Lectures				**30**

Unit	Unit Title	Suggestive teaching methodology	Project (If any)	Outcome expected		Weightage of Marks (%)
				Conceptual understanding Knowledge/Skills/Attributes etc.		
I	**Relational Model**	Lecture - Demonstration and Practical Implementation in Laboratory	practical	1. To learn Conceptual understanding of Relation, Tuple, Attribute 2. Understand different types of Keys in DBMS 3. To learn Relational Algebra Operations 4. To Learn concepts of ERD		30%
II	**Basics of SQL (Structured Query Language)**	Lecture - Demonstration and Practical Implementation in Laboratory	practical	1. Understand concept of SQL 2. To learn different commands under DDL, DML ,DQL, DCL		35%

| III | **Advance SQL (Structured Query Language)** | Lecture - Demonstration and Practical Implementation in Laboratory | practical | Understand concept of advance commands in SQL like Sub-queries, Nested queries ,Use of group by, having and order by | | 35% |

Suggested Books:

Unit	Evaluation Method	Marks (100)			Project/Practical (If any)
		Formative Assessment		Summative Assessment	
		CCE I (20)	CCE II (20)	SEMESTER (60)	
1	Assignment and Quiz on Relational Model	MCQ	Assignment		Practical in Computer Laboratory
2	Test and Lab course work on SQL (Structured Query Language)	MCQ	Assignment		Practical in Computer Laboratory
3	Test and Lab course work on SQL (Structured Query Language)	MCQ	Assignment		Practical in Computer Laboratory

Sr. No.	Name of Book	Author	Publication
1	Database System Concepts	By Henry korth and A.	Silberschatz
2	SQL, PL/SQL The Programming Language Oracle	Ivan Bayross,	BPB Publication.
3	Database Systems Concepts, Designs and Application	Shio Kumar Singh,	Pearson
4	Introduction to SQL	Reck F. van der Lans	Pearson
5	Modern Database Management	Jeffery A Hoffer , V.Ramesh, Heikki Topi	Pearson
6	Database M anagement Systems	Debabrata Sahoo	Tata MacgrawHill

FY BBA Computer Applications
Semester I

Course Code: 23BA1-D071	Course: Ancient Indian Textile Industry	Marks: 50 Credits: 2

Course Objectives:
1. To impart the information about the evolution of the ancient Indian textile industry and provide exposure to the students about the economic strength of Indian economy in the past gained from the manufacturing of textile and its exports.
2. To Aquent students with the knowledge of sourcing of raw material and various textile art forms in various regions ancient India.

Course Outcome:

After completing the course, the student shall be able to

CO1. Perceive the glory of India as a leading exporter on the front of textile and know the relative importance of Indian textile industry since last number of centuries and will feel proud of about it.

CO2. Aquent students with the knowledge of sourcing of raw material and various textile art forms in various regions of ancient India.

Unit	Unit Title	Contents	No. of lectures
I	**Evolution of Indian Textiles Industry**	1.1 History of Indian Textile Trade and Exchange in Ancient India. 1.2 Textile Industry in India during: Indus Valley Civilisation 1.3 Vedic and post-Vedic period 1.4 Mauryan periods (Kautilya's Arthashatra) later Mauryan period 1.5 Gupta period 1.6 Later period 1.7 Contribution of Textile Industry in Ancient 1.8 Medieval Indian Economy.	16
2	**Study of Ancient Indian Textile**	2.1 India as the ancient home of cotton and silk fabrics. 2.2 Major woven fabrics in ancient India 2.3 Major Variety of Textile developed in different parts of India 2.4 Variety of Dye in India	12
Total No of Lectures			**28 (60 min)**

Total No. of Lectures for Assessment and Evaluation	2

Teaching methodology

Unit	Unit Title	Teaching methodology	Project /Hands on exposure/ Practice based	Outcome expected		Weightage of Marks (%)
				Conceptual understanding Knowledge/Skills/Attributes etc.		
I	**Evolution of Indian Textiles Industry**	1. Lecture Method 2. Explanation based on PowerPoint Presentations 3. Video Lectures 4. Quiz	N. A.	1. Perceive the glory of India as a leading exporter on the front of textile and know the relative importance of Indian textile industry since last number of centuries and will feel proud of about it.		50%
2.	**Study of Ancient Indian Textile**	1. Lecture Method 2. Explanation based on PowerPoint Presentations 3. Video Lectures 4. Objective Questions 5. Quiz	N. A	2. Aquent students with the knowledge of sourcing of raw material and various textile art forms in various regions of ancient India.		50 %

Suggested Books:

Sr. No.	Title of the Book	Author/s	Publication	Place
1.	Textile Industry in Ancient India - An Analysis (From Maurya Period to 7th Century)	Nidhi Sidharth	Shri Natraj Prakashan	Delhi
2.	Textiles in Ancient India From Indus Valley Civilization to Maurya Period	Kiran Singh	Vishwavidhyalaya Prakashan	Varanasi

	History of the Indian Cotton Textile Industry	V. B. Kulkurni	Millowners' Association	
3.				

Suggested Web/E-Learning Resources

Sr. No.	Topic of the Lecture	Lectures (Available on Youtube/Swayam/MOOCS etc.)	Films	Journals/Articles/ Case studies
1.	Ancient Indian Textile Technology	https://youtu.be/xp5GbJ9-t98		
2.	Textiles and Fabrics in Ancient India	https://indianculture.gov.in/node/2730142		
3.	History | INDIAN CULTURE	https://indianculture.gov.in/textiles-and-fabrics-of-india/history		
4.	Indian textiles · V&A (vam.ac.uk)	https://www.vam.ac.uk/articles/indian-textiles		
5.	Natural Fiber: Backbone of Indian Textile Industry			https://youtu.be/SShVl-O0ZbQ
5	How India transformed Global Fashion			https://youtu.be/RGnPGTkNrj8
6.	Movie: Bunkar: The Last of Varanasi Weavers			https://tubitv.com/movies/650967/bunkar-the-last-of-the-varanasi-weavers

FYBBA CA - Semester-I		
Course Code: 23BA1-G041	**Subject: Principles of Management**	**Marks: 50** **Credits: 2**

Course Objectives:

- To study the fundamentals of Management
- To study various functions of Management

Course Outcome:

After completing the course, the student shall be able to

CO1: Understand the Fundamentals of Management.

CO2: Understand the various functions of Management

Unit	Unit Title	Contents	No of Lectures
	Introduction to Management	1.1 Meaning, Nature, Importance & Functions of Management 1.2 Role of Managers. 1.3 Difference between Management and Administration. 1.4 Management as a Science, Art & Profession	

| | Managerial Functions | 2.1 Forecasting: Meaning, Need ,Types.
 2.2 Planning: Meaning, Importance, Types, Process antages, Disadvantages.
 2.3 Organizing: Meaning, Concept,
 2.4 Delegation of <br> hority: Meaning, Importance
 5 Decentralization: Meaning and, Importance
 2.6 Decision Making: Meaning, Types
 2.7 Direction: Meaning, Nature.
 2.8 Motivation: Meaning & Importance.
 9 Controlling :Meaning,
 Importance, Process | |
| Teaching + Evaluation (25+5) | | | **30 Hours** |

Unit	Unit Title	Teaching methodology	Project (If any)	Outcome expected- Conceptual understanding Knowledge/Skills/Attributes etc.		Weightageof Marks (%)
				Course Outcome(CO)	**Learning Outcome (LO)**	
	Introduction to Management	Lectures, Group Discussion, Role Play	-----	Understand the Fundamentalsof Management.	Values for life andcharacter building. Disciplinaryknowledge	%
	Managerial Functions	Situation Analysis, Business games case studies.	------	Understand the applications of Managerial Functions	Cooperation/Teamwork Reflective Thinking Leadership Readiness/Qualities Decision Making Skills	%

Unit	Evaluation Method	Marks (50)			Project/Practical (If any)
		Formative Assessment		Summative Assessment	
		CCE I(10)	CCE II(10)	SEMESTER(30)	
I	Introduction to Management	Assignment	Internal	Semester End	NA
	Managerial Functions				

Suggested Readings:

Sr No	Name of the Book	Author	Publication	Edition	Place
1	Management Conceptsand Strategies	J.S. Chandan	Vikas Publishing House Pvt. Ltd.	--	New Delhi
2	Principles of Management	Harold Koontz , Heinz Weihrich , A. Ramachandra Arysri	McGraw hill companies	--	New Delhi
3	Management A Globaland Entrepreneurial Perspective	Heinz Weihrich , Mark V. Cannice , Harold Koontz	McGraw hill companies	--	New Delhi
4	Management – 2008 Edition	Robert Kreitner , MamataMohapatra	Biztantra – Management ForFlat World	--	New Delhi

5	Introduction to Management	John R. Schermerhorn	Wiley India Pvt. Ltd.	--	New Delhi
6	Principles of Management	P.C. Tripathi , P.N. reddy	McGraw hill companies	--	New Delhi
7	Management Text andCases	R. SatyaRaju , A. Parthasarthy	PHI learning Pvt.Ltd	--	New Delhi
8	Management (Multi-Dimensional Approach)	H. R. Appannaiah , G. Dinakar , H.A. Bhaskara	Himalaya Publishing House	--	Mumbai
9	Principles of Management	L M Prasad	Himalaya Publishing House	--	Mumbai

Practical Slips

Q1. Write a C program to accept dimensions of a cylinder and display the surface area andvolume of cylinder. **[15 Marks]**

Q2. Write a C program to find product of matrices. **[25 Marks]**

Q3. Consider the following entities and their relationships. Create a RDB in 3 NF with appropriate data types and Constraints. **[15 Marks]**
Emp(eno ,ename ,designation ,salary, Date_Of_Joining)Dept(dno,dname ,loc)
The relationship between Dept & Emp is one-to-many.
Constraints: - Primary Key, ename should not be NULL, salary must be greater than 0.

Consider the above tables and Execute the following queries:
1. Add column phone_No into Emp table with data type int.
2. Delete the details of Employee whose designation is 'Manager'.

Q4. Consider the above database and execute the following queries: **[25 Marks]**
1. Display the count of employees department wise.
2. Display the name of employee who is 'Manager' of "Account Department".
3. Display the name of department whose location is "Pune" and "Mr. Advait" isworking in it.
4. Display the names of employees whose salary is greater than 50000 and departmentis "Quality".
5. Update Dateofjoining of employee to '15/06/2019' whose department is 'computerscience' and name is "Mr. Roy".

Q5. Viva / Oral **[10 Marks]**

Q6. Lab Book **[10 Marks]**

Q1. Write a C program to accept radius of a circle and display the area and circumference of a circle. [15 Marks]

Q2. Write a program to calculate sum of following series up to n terms. [25 Marks]
$$Sum=X+X^2/2+X^3/3+……$$

Q3. Consider the following entities and their relationships. Create a RDB in 3 NF with appropriate data types and Constraints. [15 Marks]
Sales_order (ordNo, ordDate)
Client (clientNo, ClientName, addr)

The relationship between Client & Sales_order is one-to-many.Constraints: - Primary Key, ordDate should not be NULL.

Consider the above tables and execute the following queries:
1. Add column amount into Sales_order table with data type int.
2. Delete the details of the clients whose names start with 'A' character.

Q4. Consider the above tables and execute the following queries: [25 Marks]

1. Delete sales order details of client whose name is "Patil" and order date is "09/08/2019".
2. Change order date of client_No 'CN001' to '18/03/2019'.
3. Delete all sales_record having order date is before '10 /02/2018'.
4. Display date wise sales_order given by clients.
5. Update the address of client to "Pimpri" whose name is 'Mr. Roy'.

Q5. Viva / Oral [10 Marks]

Q6. Lab Book [10 Marks]

Q1. Write a C program to accept temperatures in Fahrenheit (F) and display it in Celsius(C)and Kelvin (K) (Hint: C=5.0/9(F-32), K = C + 273.15)   [15 Marks]

Q2. Write a menu driven program to perform the following operations on strings using standardlibrary functions: [25 Marks]
   1. Length of String   2. Copy String 3. Connect Two Strings 4. Compare two strings

Q3. Consider the following entities and their relationships. Create a RDB in 3 NF with appropriate data types and Constraints.   [15 Marks]

Hospital (hno ,hname , city, Est_year, addr)Doctor (dno , dname , addr, Speciality)

The relationship between Hospital and Doctor is one - to – Many Constraints: - Primary Key, Est_year should be greater than 1990.

Consider the above tables and execute the following queries:
   1. Delete addr column from Hospital table.
   2. Display doctor name, Hospital name and specialty of doctors from "Pune City" .

Q4. Consider the above tables and execute the following queries: [25 Marks]
   1. Display the names of the hospitals which are located at "Pimpri" city.
   2. Display the names of doctors who are working in "Birla" Hospital and city name is "Chinchwad".
   3. Display the specialty of the doctors who are working in "Ruby" hospital.
   4. Give the count of doctor's hospital wise which are located at "Pimple Gurav".
   5. Update an address of Doctor to "Pimpri" whose hospital is "Ruby clinic".

Q5. Viva / Oral   **[10 Marks]**

Q6. Lab Book   **[10 Marks]**

Q1. Write a C program to accept two numbers and print arithmetic and harmonic mean ofthe two numbers (Hint: AM= (a+b)/2 ,HM = ab/(a+b))   **[15 Marks]**

Q2. Write a C program to sum of middle row & column of metrics.   **[25 Marks]**

Q3. Consider the following entities and their relationships. Create a RDB in 3 NF with appropriate data types and Constraints.   **[15 Marks]**
        Patient (PCode, Name, Addr, Disease)
        Bed (Bed_No, RoomNo, loc)

Relationship: - There is one-one relationship between patient and bed.
Constraints: - Primary key, RoomNo must be greater than Bed_No, Addr should not be null.

Consider the above tables and execute the following queries:
    1. Display the details of patients who are from "Pimple Gurav".
    2. Delete the details of patient whose Bed_No is 1 and RoomNo is 105.

Q4. Consider the above tables and execute the following queries: **[25 Marks]**

    1. Display the count of patient room wise.
    2. Display the names of patients who are admitted in room no 101.
    3. Display the disease of patient whose bed_No is 1.
    4. Display the room_no and bed_no of patient whose name is "Mr Roy".
    5. Give the details of Patient who is admitted on 2nd flr in roomno 102.

Q5. Viva / Oral   **[10 Marks]**

Q6. Lab Book   **[10 Marks]**

Q1. Write a C program to accept dimensions length (l), breadth(b) and height(h) of a cuboids and display surface area and volume (Hint : surface area=2(lb+lh+bh), volume=lbh) **[15 Marks]**

Q2.Write a program which accepts a sentence from the user and alters it as follows: Every spaceis replaced by *, case of all alphabets is reversed, digits are replaced by ? [25 Marks]

Q3. Consider the following entities and their relationships. Create a RDB in 3 NF with appropriate data types and Constraints. **[15 Marks]**

Customer (cust_no, cust_name, address, city)Loan (loan_no, loan_amt)

The relationship between Customer and Loan is Many to

ManyConstraint: Primary key, loan_amt should be > 0.

Consider the above tables and execute the following queries:
1. Add Phone_No column in customer table with data type int.
2. Delete the details of customer whose loan_amt<1000.

Q4. Consider the above tables and execute the following queries: **[25 Marks]**

1. Find details of all customers whose loan_amt is greater than 10 lakh.
2. List all customers whose name starts with 'D' character.
3. List the names of customer in descending order who has taken a loan fromPimpri city.
4. Display customer details having maximum loan amount.
5. Update the address of customer whose name is "Mr. Patil" and loan_amt isgreater than 100000.

Q5. Viva / Oral **[10 Marks]**

Q6. Lab Book **[10 Marks]**

Q1. Write a C Program to accept a character from the keyboard and display its previous and next character in order. Ex. If character entered is 'd', display "The previous character is c", "The next character is e". **[15 Marks]**

Q2. Write a program to accept a string and then count the occurrences of a specific character of a string. **[25 Marks]**

Q3. Consider the following entities and their relationships. Create a RDB in 3 NF with appropriate data types and Constraints. **[15 Marks]**

   Project (pno, pname, start_date, budget, status) Department (dno, dname, HOD, loc)

   The relationship between Project and Department is Many to One. Constraint: Primary key.
   Project Status Constraints: C – Completed,
   P - Progressive, I - Incomplete

Consider the above tables and execute the following queries:
1. Drop loc column from department table.
2. Display the details of project whose start_date is before one month and status is "Progressive"

Q4. Consider the above tables and execute the following queries: **[25 Marks]**

1. Display the names of project and department who are worked on projects whose status is 'Completed'.
2. Display total budget of each department.
3. Display incomplete project of each department.
4. Display all project working under 'Mr.Desai'.
5. Display department wise HOD.

Q5. Viva / Oral **[10 Marks]**

Q6. Lab Book **[10 Marks]**

Q1. Write a C program to accept the x and y coordinates of two points and compute the distance between the two points. [15 Marks]

Q2. Write a program to calculate Multiplication of two matrices of order m*n. [25 Marks]

Q3. Consider the following entities and their relationships. Create a RDB in 3 NF with appropriate data types and Constraints. [15 Marks]

Room (roomno, desc, rate)
Guest (gno, gname,
no_of_days)
The relationship between Room and Guest is One to One.Constraint: Primary key, no of days should be > 0.

Consider the above tables and execute the following queries:
1. Update the rate of room to 5000 whose type is "AC".
2. Display the name of guest who is staying 2 days in roomno 101.

Q4. Consider the above tables and execute the following queries: [25 Marks]
1. Display room details according to its rates in ascending order.
2. Display the roomno in which "Mr. Advait" is staying for 7 days.
3. Find no. of AC rooms.
4. Find names of guest with maximum room charges.
5. Display guest wise halt days.

Q5. Viva / Oral **[10 Marks]**

Q6. Lab Book **[10 Mar**

Q1. A cashier has currency notes of denomination 1, 5 and 10. Write a C program to accept the withdrawal amount from the user and display the total number of currency notes of each denomination the cashier will have to give. [15 Marks]

Q2. Write a menu driven program to perform the following operation on m*n Matrix **[25 Marks]**

1. Calculate sum of upper triangular matrix elements
2. Calculate sum of diagonal elements

Q3. Consider the following entities and their relationships. Create a RDB in 3 NF with appropriate data types and Constraints. [15 Marks]

Book (Book_no, title, author, price, year_published)
Customer (cid, cname, addr)
Relation between Book and Customer is Many to Many with quantity asdescriptive attribute.

Constraint: Primary key, price should be >0.

Consider the above tables and execute the following queries:

1. Display the name of book whose author is "Mr. Gadhave".
2. Add column EMailId into customer table.

Q4. Consider the above tables and execute the following queries: [25 Marks]

1. Display customer details from 'Mumbai'.
2. Display author wise details of book.
3. Display customer name that has purchased more than 3 books.
4. Display book names having price between 100 and 200 and published year is 2019.
5. Update the title of book to "DBMS" whose author is "Mr. Talore".

Q5. Viva / Oral **[10 Marks]**

Q6. Lab Book **[10 Marks]**

Q1. Write a C program to accept a character from the user and check whether the characteris a vowel or consonant. **[15 Marks]**

Q2. Write a program to accept two numbers as range and display multiplication tableof all numbers within that range. **[25 Marks]**

Q3. Consider the following entities and their relationships. Create a RDB in 3 NF with appropriate data types and Constraints. **[15 Marks]**
   Property (pno, desc, area, rate)
   Owner (owner_name, addr,
   phno)

 The relationship between owner and Property is One to Many.Constraint: Primary key, rate should be > 0

 Consider the above tables and execute the following queries:
1. Display area of property whose rate is less than 100000.
2. Give the details of owner whose property is at "Pune" .

Q4. Consider the above tables and execute the following queries: **[25 Marks]**

1. Display area wise property details.
2. Display property owned by 'Mr.Patil' having minimum rate.
3. Delete all properties from "pune" owned by "Mr. Joshi".
4. Update the phone Number of "Mr. Joshi" to 9922112233 who is havingproperty at "Uruli Kanchan".
5. Delete column address from Owner table.

Q5. Viva / Oral **[10 Marks]**

Q6. Lab Book **[10 Marks]**

Q1. Write a C program to accept the x and y coordinate of a point and find the quadrant in which the point lies. [15 Marks]

Q2. Write a program, which accepts a number n and displays each digit in words.

Example: 6702 Output = Six-Seven-Zero-Two [25 Marks]

Q3. Consider the following entities and their relationships. Create a RDB in 3 NF with appropriate data types and Constraints. [15 Marks]

Employee (emp_no, name, skill, payrate)Position (posting_no, skill)

The relationship between Employee and Position is Many to Many with day and shift asdescriptive attribute.

Constraint: Primary key, payrate should be > 0.
Consider the above tables and execute the following queries:
1. Display skill of employees name wise.
2. Update the posting of employee to 220 whose skill is "Manager".

Q4. Consider the above tables and execute the following queries: [25 Marks]
1. Find the names and rate of pay of all employees who has allocated a duty.
2. Give employee number who is working at posting_no. 201, but don't have theskill of waiter.
3. Display a list of names of employees who have skill of chef and who has assigned a duty.
4. Display shift wise employee details.
5. Update payrate of employees to 20000 whose skill is waiter.

Q5. Viva / Oral **[10 Marks]**

Q6. Lab Book **[10 Marks]**

Q1. Write a C program to accept the cost price and selling price from the user. Find out if the seller has made a profit orloss and display how much profit or loss has been made.
[15 Marks]

Q2. Accept radius from the user and write a program having menu with the following options and corresponding actions   **[25 Marks]**

Options	ions
1. Area of Circle	Compute area of circle and print
2. Circumference of Circle	Compute Circumference of circle and print
3. Volume of Sphere	Compute Volume of Sphere and print

Q3. Consider the following entities and their relationships. Create a RDB in 3 NF with appropriate data types and Constraints.   **[15 Marks]**

       Bill (billno, day, tableno, total)
       Menu (dish_no, dish_desc,
       price)

The relationship between Bill and Menu is Many to Many with quantity as descriptiveattribute.

Constraint: Primary key, price should be > 0.
Consider the above tables and execute the following queries:
1. Display the tableno whose dish_desc is "Veg".
2. Display the special menu of Monday.

Q4. Consider the above tables and execute the following queries: **[25 Marks]**
1. Display receipt which includes bill_no with Dish description, price, quantity and total amount of each menu.
2. Find total amount collected by hotel on date 09/07/2019.
3. Count number of menus of billno 301.
4. Display menu details having price between 100 and 500.
5. Display the tableno and day whose bill amount is zero.

Q5. Viva / Oral   **[10 Marks]**

Q6. Lab Book   **[10 Marks]**

Q1. Write a C program to calculate sum of digits of a given input number. [15 Marks]

Q2. Accept two numbers from user and write a menu driven program to perform
the following operations **[25 Marks]**

1. swap the values of two variables
2. calculate arithmetic mean and harmonic mean of two numbers

Q3 Consider the following entities and their relationships. Create a RDB in 3 NF with appropriate data types and Constraints. [15 Marks]

**Movies (M_name, release_year,
budget) Actor (A_name, role, charges,
A_address)Producer (producer_id,
name, P_address)**

Relationship:- Each actor has acted in one or more movie. Each producer has produced many movies but each movie can be produced by more than one producers. Each movie hasone or more actors acting in it, in different roles.

Constraint: Primary key, release_year > 2000, A_address and P_address should notbe same.
Consider the above tables and execute the following queries:
1.   List the names of movies with the highest budget.
2. Display the details of producer who have produced more than one movie in a year.

Q4. Consider the above tables and execute the following queries: [25 Marks]

1.   List the names of movies with the second highest budget
2.   List the names of actors who have acted in the maximum number ofmovies.
3.   List the names of movies, produced by more than one producer.
4. List the names of actors who are given with the maximum charges for their movie.
5.   List the names of actors who have acted in at least one movie, inwhich 'Akshay'
    has acted.

Q5. Viva / Oral **[10 Marks]**

Q6. Lab Book **[10 Marks]**

Q1. Write a C program to accept the value of n and display sum of all odd numbers up to n.   **[15 Marks]**

Q2. Write a C program **to sum of lower triangular and upper triangular elements** of a matrix.   **[25 Marks]**

Q3. Consider the following entities and their relationships. Create a RDB in 3 NF with appropriate data types and Constraints.   **[15 Marks]**

> **Driver (driver_id, driver_name, address)Car (license_no, model, year)**

   Relation between Driver and Car is Many to Many with date and time asdescriptive attribute.

   Constraint: Primary key, driver_name should not be null. Consider the above tables and execute the following queries:
   1. Display the name of driver whose license no is "DPU123".
   2. Delete the details of car whose model is "swift".

 Q4. Consider the above tables and execute the following queries: **[25 Marks]**

   1. Display details of all persons who are driving 'Alto' car.
   2. Update model of car to "SUV300" whose manufactured year is 2019.
   3. Display car details manufactured before year 2000.
   4. In which day 'Mr. Ram' drives maximum number of cars.
   5. Display total number of drivers who drives car in each year.

Q5. Viva / Oral   **[10 Marks]**

Q6. Lab Book   **[10 Marks]**

Q1. Write a C program to check whether a input number is Armstrong number or not.
[15 Marks]

Q2. Write a program to accept a number and count number of even, odd and zero digitswithin that number. **[25 Marks]**

Q3. Consider the following entities and their relationships. Create a RDB in 3 NF with appropriate data types and Constraints. **[15 Marks]**

Student (stud_reg_no, stud_name, class)Competition (cno, cname, ctype)

Relation between Student and Competition is Many to Manywith rank and year as descriptive attribute.

Constraint: Primary key, class must be("FY,SY,TY").

Consider the above tables and execute the following

queries:
1. Count total no students class wise.
2. Delete the details of student who has participated in "Mehandi" competation.

Q4. Consider the above tables and execute the following queries: **[25 Marks]**

1. Display students from class 'FY' and participated in 'E-Rangoli ' Competition.
2. Find the number of student for programming competition.
3. Display the names of first three winners of each competition.
4. Display average number of students participating in each competition.
5. Display total number of competition held in the year 2014.

Q5. Viva / Oral **[10 Marks]**

Q6. Lab Book **[10 Marks]**

Q1. Write a C program to check whether a input number is perfect number of not. [15 Marks]

Q2. Write a program having a menu with the following options and corresponding actions   [25 Marks]

Options	Actions
1. Area of square	Accept length ,Compute area of square and print
2. Area of Rectangle	Accept length and breadth, Compute area of rectangle and print
3. Area of triangle	Accept base and height , Compute area of triangle and print

Q3. Consider the following entities and their relationships. Create a RDB in 3 NF with appropriate data types and Constraints.   [15 Marks]

Plan (plan_no, plan_name, nooffreecalls, freecalltime, fix_amt)Customer (cust_no, cust_name, mobile_no)

Relation between Plan and Customer is One to Many.
Constraint: Primary key, fix_amt should be greater than 0.

Consider the above tables and execute the following queries:
1.   Display the details of plan who has taken by "Mr. Patil".
2.   Update the mobile No of customer to 7020079536 whose name is "MrRoy" and plan is
   "Go Max".

Q4. Consider the above tables and execute the following queries: [25 Marks]
1. Display the plan having minimum response.
2. Display customer details starting their mobile number with 98.
3. Display the customer details that are getting less number of free calls than that ofthe plan 'Let's Rock'.
4. Delete the details of 'John' who has stopped 'Go Max' plan.
5. Find the plan whose fixed amount is greater than 5000.

Q5. Viva / Oral   **[10 Marks]**

Q6. Lab Book   **[10 Marks]**

Q1. Write a C program to calculate xʸ without using standard library function. [15 Marks]

Q2. Write a program to display union and intersection of two 1D array. [25 Marks]

Q3. Consider the following entities and their relationships. Create a RDB in 3 NF with appropriate data types and Constraints. [15 Marks]

> **Employee (emp_id, emp_name, address)**
> **Investment (inv_no, inv_name, inv_date, inv_amount)**

Relation between Employee and Investment is One to Many.Constraint: Primary key, inv_amount should be > 0.

Consider the above tables and execute the following queries:
1. Display the details of employee who has invested amount in "Mutual Fund".
2. Add column Phone_No in Employee table.

Q4. Consider the above tables and execute the following queries: [25 Marks]

1. Display employee details who have invested more than 100000.
2. Display employee wise total investment amount.
3. Display the employee names who invest on date 2nd Jan 2013.
4. Display employee whose investment are more than 3.
5. Find average investment of employees of Pune.

Q5. Viva / Oral [10 Marks]

Q6. Lab Book [10 Marks]

Q1. Write a C program to display multiplication table of a given input number [15 Marks]

Q2. Write a menu driven program to perform the following operation on m*n

Matrix   **[25 Marks]**

1. Display transpose of a matrix
2. Calculate sum of all odd elements of matrix

Q3. Consider the following entities and their relationships. Create a RDB in 3 NF with appropriate data types and Constraints.   **[15 Marks]**

Politicians (pno, pname, telephone_no)Party (party_code, party_name)

Relation between Politicians and Party is Many to One. Constraint: Primary key, party_name should not be null.

Consider the above tables and execute the following queries:
1. Display the name of party whose politician is "Mr. Patil".
2. Update party name of politician whose name is "Mr.Pawar".

Q4. Consider the above tables and execute the following queries: **[25 Marks]**

1. Display party names in ascending order.
2. Find the party who is having less number of members than 'Congress' party.
3. Display party wise politician name with details.
4. Display the party name with the details of politicians whose name include "Rao".
5. Which party has maximum politicians

Q5. Viva / Oral   **[10 Marks]**

Q6. Lab Book   **[10 Marks]**

Q1. Write a C program to generate following triangle up to n lines. [15 Marks]

    1

    1 2

    1 2 3

Q2. Write a C program to design calculator with basic operations using switch case.[25 Marks]

Q3. Consider the following entities and their relationships. Create a RDB in 3 NF with appropriate data types and Constraints. [15 Marks]

        Game (game_name, no_of_players, coach_name)Player (pid, pname, address, club_name)

Relation between Game and Player is Many to Many. Constraint: Primary key, no_of_players should be > 0.

Consider the above tables and execute the following queries:
1. Display the name of club whose coach is "Mr. Sehwag".
2. Update the game name of player to cricket whose name is "Mr Rahane".

Q4. Consider the above tables and execute the following queries: [25 Marks]

1. Display players from 'Delhi'.
2. List all games which require more than 4 players.
3. Find the total number of cricket players of 'sports club".
4. Display games having more number of players than that of football.
5. Display coach wise player details.

Q5. Viva / Oral [10 Marks]

Q6. Lab Book [10 Marks]

Q1. Write a C program to generate following triangle up to n lines. [15 Marks]

```
*    *    *    *
*    *    *
*    *
*
```

Q2. Write a menu driven program to perform the following operation on m*n
Matrix **[25 Marks]**

1. Find sum of diagonal elements of matrix
2. Find sum of all even numbers of matrix

Q3. Consider the following entities and their relationships. Create a RDB in 3 NF with appropriate data types and Constraints. [15 Marks]
Item (item_no, item_name, quantity)
Suppliers (sup_no, sup_name, address, city, phone_no)

Relation between Item and Supplier is Many to Many with rate anddiscount as descriptive attribute.

Constraint: Primary key, phone_no must be 10 digits.

Consider the above tables and execute the following

queries:

1. Display item wise quantity.
2. Display Suppliers whose names are starting with 's' character.3.

Q4. Consider the above tables and execute the following queries: [25 Marks]
1. Delete items having quantity less than 2.
2. Display total number of suppliers who are supplying 'Refrigerator'.
3. Display all suppliers supplying 'Washing Machine' with minimum cost.
4. Give supplier details who give maximum discount on each item.
5. List suppliers supplying maximum number of item.

Q5. Viva / Oral **[10 Marks]**

Q6. Lab Book **[10 Marks**

Q1. Write a C program to generate following triangle up to n lines. [15 Marks]

```
1
2  3
4  5  6
```

Q2. Write a program to calculate addition of two matrices [25 Marks]

Q3. Consider the following entities and their relationships. Create a RDB in 3 NF with appropriate data types and Constraints. [15 Marks]

Wholesaler (w_no, w_name, address, city)Product (product_no, product_name, rate)

Relation between Wholesaler and Product is Many to Manywith quantity as descriptive attribute.

Constraint: Primary key, rate should be > 0.

Consider the above tables and execute the following queries:
1. Update product_name to "Monitor" whose supplier is "Mr. Patil".
2. Display product wise rate.

Q4. Consider the above tables and execute the following queries: [25 Marks]

1. Display wholesaler from 'Pune' city and supplying 'Monitor'.
2. Display total number of wholesaler of each product.
3. Display all wholesalers who are supplying 'Keyboard' with maximum price.
4. Display total quantity of each product sold by 'Mr. Khabia'.
5. Decrement rate of all products by 5% supplied by wholesaler from 'Pune ' city.

Q5. Viva / Oral **[10 Marks]**

Q6. Lab Book **[10 Marks]**

Q1. Write a C program to generate following triangle up to n lines.   [15 Marks]

    A

    A   B

    A   B   C

Q2. Write a C Program to find the sum of digits of a number until a single digit is occurred

[25 Marks]

Q3. Consider the following entities and their relationships. Create a RDB in 3 NF with appropriate data types and Constraints.   [15 Marks]

   Client (client_no, client_name, address, birthdate)
   Policy_info (policy_no, desc, maturity_amt, prem_amt, date)

Relation between Client and Policy_info is Many to Many
Constraint: Primary key, prem_amt and maturity_amt should be > 0.

Consider the above tables and execute the following queries:
1. Display premium amount paid by "Mr. Mahandule" since 1 Jan 2018.
2. Display the details of client who have taken policy "Jeevan Raksha".

Q4. Consider the above tables and execute the following queries: [25 Marks]

1. Display Policy details having maturity amount >500000.
2. Find total number of policies purchased on 12th January 2019.
3. Find clients who have more than 3 policies.
4. Find all policies whose number of clients is same as that of policy 'Jeevan Raksha'.
5. Display policy wise client details.

Q5. Viva / Oral   **[10 Marks]**

Q6. Lab Book   **[10 Marks]**

Q1. Write a C program to generate following triangle up to n lines. [15 Marks]

A B C

A B

A

Q2. Write a menu driven program to perform the following operation on m*n
Matrix **[25 Marks]**

1. Find sum of non diagonal elements of matrix
2. Find sum of all odd numbers of matrix

Q3. Consider the following entities and their relationships. Create a RDB in 3 NF with appropriate data types and Constraints. [15 Marks]

Train (train_no, train_name, depart_time, arrival_time,source_stn, dest_stn)Passenger (p_id,p_name,address,age, gender)
Relation between Train and Passenger is Many to Many with seat_no, amount and date asdescriptive attribute.
Constraint: Primary key, seat_no should not be null.

Consider the above tables and execute the following queries:

1. Display passenger names and their seat no's of train "sahyadri express".
2. Display details of train in which "Mr. Roy" is travelling from "Pune" to "Uruli Kanchan".

Q4. Consider the above tables and execute the following queries: [25 Marks]

1. Display passenger details having age>50
2. Display total amount collected for "Kokan Express" on 5th January 2019.
3. Find total number of passenger of "Pune to Mumbai" route.
4. Cancel all the trains of 21st January 2019.
5. Calculate total number of male passenger in "Shatabdi Express".

Q5. Viva / Oral **[10 Marks]**

Q6. Lab Book **[10 Marks]**

Q1. Write a C program to accept n elements of 1D array and then display sum of all elements of array. **[15 Marks]**

Q2. Accept n integers in an array. Copy only the non-zero elements to another array.Calculate the sum and average of non-zero elements. [25 Marks]

Q3. Consider the following entities and their relationships. Create a RDB in 3 NF with appropriate data types and Constraints. [15 Marks]

Student
(rno,sname,address,class)
Subject (subno,subname)

Relationship: - Student and Subject are related with many-to-many relationship with attributemarks and status.
Constraints: - Primary Key, class must be fy,sy,ty.

Consider the above tables and execute the following queries:
1. List the names of student class wise.
2. Display the marks of students subject wise.

Q4. Consider the above tables and execute the following queries: **[25 Marks]**

1. List the distinct names of students who have either Electronics, or Statistics or bothsubjects.
2. List the names of students who are either passed or failed.
3. List the students who have "Database" subject and they are not in "TY" class.
4. List the names of students who are not failed in any subject.
5. List the names of students not staying at "Uruli Kanchan".

Q5. Viva / Oral **[10 Marks]**

Q6. Lab Book **[10 Marks]**

Q1. Write a C program to find maximum elements of 1D array [15 Marks]

Q2. . Write a C program to print this triangle up to n numbers [25 Marks]

    1
   3 5
  7 9 11

Q3. Consider the following entities and their relationships. Create a RDB in 3 NF with appropriate data types and Constraints. [15 Marks]

Bus(bus_no, capacity, depo_name)

Route(Route_no, source, destination, no_of_stations)

Relation between Bus and Route is Many to One.
Constraint: Bus capacity should be greater than 0, depo_name should not be null.

Consider the above tables and execute the following queries:
1. List all buses at depo "kothrud".
2. Delete bus details whose number is "MH12HL7812".

Q4. Consider the above tables and execute the following queries: [25 Marks]

1. List all buses on route no 41.
2. List the route details having number of stations > 10.
3. Delete all buses having capacity < 20.
4. Find the maximum number of stations.
5. List all routes starting from "station".

Q5. Viva / Oral   **[10 Marks]**

Q6. Lab Book   **[10 Marks]**

Q1. Write a C program to calculate sum of all even elements of an array. [15 Marks]

Q2. Write a menu driven program for the following option [25 Marks]

1. Check input number is Armstrong or not
2. Check input number is Perfect or not

Q3. Consider the following entities and their relationships. Create a RDB in 3 NF with appropriate data types and Constraints. [15 Marks]

College (code, college_name, address)
Teacher (teacher_id, teacher_name, Qualification, specialization, salary, Desg)

Relation between Teacher and College is Many to One. Constraint: Primary Key, qualification should not be null.

Consider the above tables and execute the following queries:
1. List the name of staff having qualification is "SET-NET".
2. Update the salary of teacher to 50000 whose qualification is "PhD".

Q4. Consider the above tables and execute the following queries: [25 Marks]

1. List the college wise staff.
2. Display the details of Teachers who are working in Dr. D Y Patil College and their specialization is "Computer".
3. Display the designation of teacher whose name is "Mr Patil" and he is working in DPU college.
4. Display teacher wise salary.
5. Update an address of college to "Sant TukaramNagar" whose name is "MD College".

Q5. Viva / Oral **[10 Marks]**

Q6. Lab Book **[10 Marks]**

Q1. Write a C program to calculate length of string without using standard functions.
[15 Marks]

Q2. Write a menu driven program to perform the following operation on m*n
   Matrix   **[25 Marks]**

   1. Find sum of diagonal elements of matrix
   2. **Find sum of all even numbers of matrix**

Q3. Consider the following entities and their relationships. Create a RDB in 3 NF with
   appropriate data types and Constraints.   **[15 Marks]**

   Gym (Name, city, charges, scheme)
   Member (ID, Name, phoneNo,
   address)
Relation between Gym and member is one to many.
Constraint: Primary Key, charges must be greater
than 0.

Consider the above tables and execute the following queries:
   1. Display the scheme details of "Gold Gym".
   2. List out all the gym of "Pimpri" city.

Q4. Consider the above tables and execute the following queries: **[25 Marks]**

   1. Give the details of scheme to which "Mr. Patil" is admitted.
   2. List out gym wise members.
   3. List out scheme wise charges.
   4. Display all the members from pune city who have paid Gym charges
      more than10000.
   5. Drop column address from Member table.

Q5. Viva / Oral   **[10 Marks]**

Q6. Lab Book   **[10 Marks]**

Q1. Write a program to count the occurrences of vowel from a input string.   [15 Marks]

Q2. Write a menu driven program for the following option   [25 Marks]

      1. Calculate H.C.F
      2. Print reverse of a number

Q3. Consider the following entities and their relationships. Create a RDB in 3 NF with appropriate data types and Constraints.   [25 Marks]

      Student (rollno, sname, class, timetable)
      Lab (LabNo, LabName, capacity, equipment)

Relation between Student and Lab is Many to One. Constraint: Primary Key, capacity should not be null.

Consider the above tables and execute the following queries:
    1. Add column Phone_No with data type int in Student table.
    2. Display lab wise capacity.

Q4. Consider the above tables and execute the following queries: [25 Marks]

    1. Display practical time table of class 'FYBBA(CA)'.
    2. Display the LabName in which 'Mr Advait' is doing practical.
    3. List out class wise students.
    4. Delete the column equipment from Lab table.
    5. Update capacity of Lab to 100 whose Number is 1.

Q5. Viva / Oral   **[10 Marks]**

Q6. Lab Book   **[10 Marks]**

Q1. Write a program to accept a string and then count the occurrences of a specific
character of a string.   **[15 Marks]**

Q2. Write a program to accept two numbers as range and display multiplication table
of all numbers within that range.   **[25 Marks]**

Q3. Consider the following entities and their relationships. Create a RDB in 3 NF with
appropriate data types and Constraints.   [15 Marks]

Blood (blood_id, blood_group, cholesterol_level, storage)Donar (donar_id, name, address, gender, phone_no)

Relation between Blood and Donar is Many to one.
Constraint: Primary Key , Blood_group should not be null.

Consider the above tables and execute the following queries:
1. List out Donar wise Blood_group.
2. Display cholesterol_level of blood which is given by 'Mr. Mahandule'.

Q4. Consider the above tables and execute the following queries: [25 Marks]

1. Display the stock of blood whose group is "O+ve".
2. Delete gender column from Donar table.
3. Update storage of blood to 100 bottles whose blood_group is "B+ve".
4. Display blood group having maximum storage.
5. Display the details of donar in ascending order of donar_name.

Q5. Viva / Oral   **[10 Marks]**

Q6. Lab Book   **[10 Marks]**

Q1. Write a C program to calculate factorial of a number using user defined function. [15 Marks]

Q2. Write a program, which accepts a number n and displays each digit separated by tabs. Example: 6702 Output = 6   7   0   2   [25 Marks]

Q3. Consider the following entities and their relationships. Create a RDB in 3 NF with appropriate data types and Constraints.   [15 Marks]

Country (CId, CName , no_of_states, area, location,

population)Citizen(Id, Name, mother_toung, state_name)

Relation between Country and Citizen is one to many.Constraint: Primary key, area should not be null.

Consider the above tables and execute the following queries:
1. List out country wise number of states.
2. Display the name of country having minimum population.

Q4. Consider the above tables and execute the following queries: [25 Marks]

1. Display citizens whose mother_tounge is 'marathi'.
2. Update the population of India to 10000000.
3. Display citizen details in descending order by state_name.
4. Display country details having population more than 1000000.
5. Display Country details where 'Ms Reshma' is staying.

Q5. Viva / Oral   **[10 Marks]**

Q6. Lab Book   **[10 Marks]**

Q1. Write a program to find sum of digits of a given input number using user defined
Function   **[15 Marks]**

Q2. Write a program to accept a number and count number of even, odd and zero digits
within that number.   **[25 Marks]**

Q3. Consider the following entities and their relationships. Create a RDB in 3 NF with
appropriate data types and Constraints.   [15 Marks]

Library(Lno, Lname, Location, Librarian,
no_of_books)Book(Bid, Bname, Author_Name,
Price, publication)

Relation between Library and Book is one to
many.Constraint: Primary key, Price should not
be null.

Consider the above tables and execute the following queries:
1. Display library details having number of books greater than 10000.
2. Display the list of books of 'BPB' publication.

Q4. Consider the above tables and execute the following queries: [25 Marks]

1. Display publication wise number of books.
2. Display total price of books of 'Nirali' publication.
3. Delete the book details of Vision publication from 'DPU' Library.
4. Display all books of author whose initial character of name is 'A'.
5. Update number of books of success publication to 1000 from DYP library.

Q5. Viva / Oral   **[10 Marks]**

Q6. Lab Book   **[10 Marks]**

FYBBA CA Semester-I		
Course Code: 23BA1-I061	**Subject : English for Business Communication**	**Marks : 50** **Credits : 2**
Course Objectives : **To understand the English grammar and writing skills.** **To understand the basic theories of professional communication skills.**		
Course Outcome : **After completing the course, the student shall be able to** **CO1: Demonstrate basic knowledge of English grammar and writing skills** **CO2: Understand the basic theories of professional communication skills**		

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it	t Title	Contents
	Basic English Grammar & writing skills	Active and Passive voice, tenses Identifying nouns, adjectives, adverbs, pronouns, punctuations Comprehension skills and paraphrasing 1.4.Concept ,need and functions of writing skills like Business Correspondence Essentials of Business Letter Types of Business letters Layout/Drafting of business letter. Business Correspondence: Enquiry Letter, Reply to enquiry, Purchase Order, Credit & Status enquiry letter, Sales Letter,Complaint letter, promotional letter, leave application and resignation letters Report Writing and Internal Correspondence: Report- Meaning, Need & Importance, Types. Notices, memos, circulars, Blog writing.

	Introduction to Professional Communication Skills and their methods	2.1 Communication - meaning, importance, communication process model
		Verbal Communication, Non-verbal Communication, Formal Communication, Informal Communication.
		Oral communication- Objectives, Functions, Advantages and Disadvantages. Types of Oral Communication
		Written communication, Forms of written communication. Qualities, difficulties in written communication, Constraints indeveloping effective written communication.
		Non-Verbal Communication- Objectives, Functions, Advantages and Disadvantages. Forms of Non-Verbal Communication

Unit	Unit Title	Teaching methodology	Project (If any)	Outcome expected- Conceptual understanding Knowledge/Skills/Attributes etc.		Weightageof Marks (%)
				Course Outcome(CO)	Learning Outcome (LO)	
1	Basic English Grammar & writing Skills	PPT, Discussion, Grammar sheets, quiz	-	Students will understand the basic Grammar and writing skills	Conceptual understanding, reflective skills	60%
2	Introduction to Professional Communication Skills and their methods	PPT, Discussion, Video clips, poster making	-	Students will be able to understand the basic Professional Communication Skills and their methods	Conceptual skills, reflective learning	40%

Unit	Evaluation Method	Marks (100)			Project/Practical(If any)
		Formative Assessment		Summative Assessment	
		CCE I(10)	CCE II(10)	SEMESTER(30)	

I	Grammar test	5 M			-
III	Home Assignments	5 M			-
IV	Descriptive Paper	-	10 M	30 M	-

Suggested Readings:

Sr. No	Title of Book	Author/s	Publication
1	Business Communication	Meenakshi Raman , Prakash Singh	Oxford
2	Business Communication	HomaiPradhan , N.S. Pradhan	Himalaya
3	Business Communication	R.K. Madhukar	Vikas
4	Business Communication and personality Development	BiswajitDas .ipswwtaSatpathy	Excel Books
5	Technical Communication – Principles and Practice		Oxford University Press
6	English Grammar in Use	Raymond Murphy	

SRNO	Topic	Lectures (Available on Youtube/Swayam/MOOCS etc)	Films	Journals/Articles/ Case studies
	Basic English Grammar and writing skills	1. https://onlinecourses.nptel.ac.in/noc20_hs19/preview 2. https://nptel.ac.in/courses/109106129 3. https://www.youtube.com/watch?v=6NADEfJOVNo		
	Introduction to Professional Communication Skills	1. https://www.youtube.com/watch?v=DLpINabdbRI 2. https://www.youtube.com/watch?v=Mqvg2vLfbgg 3. https://www.youtube.com/watch?v=gFNQ-aZIakM 4. https://www.youtube.com/watch?v=glnMChrjU_8		1. http://ndl.iitkgp.ac.in/document/MDI5cHdNUUlnd0lnZHNoQXlvOG5lUENRNG5vb25FV0xOK2VrYVVBTKTXpYWT0

		5. https://www.youtube.com/watch?v=2nJAiNgTzKM		
		6. https://www.youtube.com/watch?v=0bepN-_VKRE		

Environment Awareness Part-I

<table>
<tr><td colspan="3" align="center">F. Y. BBA CA</td></tr>
<tr>
<td>Course Code:
23BA1-J081</td>
<td align="center">Subject : Environment Awareness Part-I</td>
<td>Marks : 50

Credits :2</td>
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Course Objectives :

1. To acquire the knowledge, values, attitudes, commitment and practices needed to protect and improve the environment and better ecosystem
2. To build knowledge among students regarding utilization of various natural resources.
3. To make students conscious on necessary bio-diversity and ecological conservations and to address complex environmental issues
4. To create awareness about various causes of environmental pollution and its remedies.
5. To study the impacts of human communities on environment

Course Outcome :

After completing the course, the student shall be able to

CO1: Understand how their actions affect on the environment hence how to build better ecosystem

CO2: Build knowledge and implement necessary practices for utilization of various natural resources

CO3: Motivate to implement various practices of Bio-diversity and to preserve Ecological Conservations of complex environmental issues.

CO4: Know various causes of Environmental Pollution and its remedies.

CO5: Study The impacts of Human Communities On Environment.

Syllabus Content:

Unit	Unit Title	Contents	No of Lectures

I	Introduction To Environmental Studies and Ecosystem	1.1 Multidisciplinary nature of environmental studies 1.2 Scope and importance; Concept of sustainability and sustainable development 1.3 Meaning of Ecosystem 1.4 Structure and functions of Ecosystem 1.5 Energy flow in an Ecosystem: Food Chains, Food Webs and Ecological Succession.	4
II	Natural Resources : Renewable and Non-renewable Resources	2.1 Land resources and Over utilization of land 2.2 Land degradation, Soil Erosion and Desertification 2.3 Deforestation: Causes And Impacts Due to Mining, Dam Building On Environment, Forests, Biodiversity And Tribal Populations 2.4 Water: Use And Over-Exploitation of Surface and Ground Water, Floods, Droughts Conflicts Over Water (International & Inter-State) 2.5 Energy Resources : Renewable And Non Renewable Energy Sources, Use Of Alternate Energy Sources, Growing Energy Needs, Case Studies	5
III	Biodiversity and Conservation	3.1 Levels Of Biological Diversity : Genetic, Species And Ecosystem Diversity 3.2 Biogeography Zones of India; Biodiversity Patterns And Global Biodiversity Hot Spots 3.3 India as a Mega-Biodiversity Nation; Endangered and Endemic Species of India 3.4 Threats To Biodiversity: Habitat Loss, Poaching Of Wildlife, Man-Wildlife Conflicts, Biological Invasions; Conservation Of Biodiversity: In-Situ And Ex-Situ Conservation Of Biodiversity. 3.5 Ecosystem and Biodiversity Services: Ecological, Economic, Social, Ethical, Aesthetic and Informational Value.	6

IV	Environmental Pollution	4.1 Environmental Pollution : Types, Causes, Effects and Controls; Air, Water, Soil And Noise Pollution 4.2 Nuclear Hazards and Human Health Risks 4.3 Solid Waste Management : Control Measures Of Urban And Industrial Waste 4.4 Climate Change, Global Warming, Ozone Layer Depletion, Acid Rain And Impacts On Human Communities And Agriculture	4
V	Human Communities and the Environment	5.1 Human Population Growth: Impacts On Environment, Human Health and Welfare 5.2 Resettlement And Rehabilitation of Project Affected Persons; Case Studies 5.3 Disaster Management : Floods, Earthquake, Cyclones And Landslides 5.4 Environmental Ethics: Role Of Indian and Other Religions and Cultures In Environmental Conservation 5.5 Environmental Movements : Chipko, Silent Valley, Bishnois of Rajasthan 5.6 Environmental Communication and Public Awareness, Case Studies (eg. CNG Vehicles In Delhi) 5.7 Environmental Ethics: Role of Indian And Other Religions And Cultures In Environmental Conservation	6
	No of Hours		25(60 mins)
	Evaluation		05
Total No of Lectures			**30**

Teaching Methodology:

Unit	Unit Title	Teaching methodology	Project (If any)	Outcome expected	Weightage of Marks (%)
				Conceptual understanding Knowledge/Skills/Attributes etc	
I	Introduction to environmental studies and Ecosystem	Presentations, Lectures series , Video Clips	NA	The student shall be able to understand how their decisions and actions affect on the environment	15%
II	Natural Resources : Renewable and Non-renewable Resources	Presentations, Lectures series , Video Clips	NA	Students will be able to develop Consciousness about the Eco-system	20%
III	Biodiversity and Conservation	Presentations, Lectures series , Video Clips	NA	Students will able to build knowledge on biodiversity and conservation	25%
IV	Environmental Pollution	Presentations, Lectures series , Video Clips	NA	Students will be able to understand causes of Environmental Pollution and its remedies	15%

V	Human Communities And The Environment	Presentations, Lectures series , Video Clips	NA	Students will understand the Environment Ethics	25%

Evaluation Method:

Unit	Evaluation Method	Marks (100)		Summative Assessment	Project/Practical (If any)
		Formative Assessment		**Summative Assessment**	**(If any)**
		CCE I (25)	**CCE II (25)**	**SEMESTER**	
1	Assignment and Quiz	Assignment	Written Exam		
2	Assignment and Quiz	Assignment	Written Exam		
3	Assignment and Quiz	Assignment	Written Exam		
4	Assignment and Quiz	Assignment	Written Exam		
5	Assignment and Quiz	Assignment	Written Exam		

Suggested Readings:

Sr. No.	Name of Book	Author	Publication	Edition	Place
1	Silent Spring	Carson R			
2	This Fissured Land: An Ecological History of India.	Gadgil, M			
3	Global Ethics and Environment	Gleeson B.			