



INSTITUTE OF SCIENCE, TECHNOLOGY & ADVANCED STUDIES (VISTAS)
(Deemed to be University Estd. u/s 3 of the UGC Act, 1956)

PALLAVARAM - CHENNAI

ACCREDITED BY **NAAC** WITH '**A**' GRADE

Marching Beyond 30 Years Successfully

INSTITUTION WITH **UGC 12B** STATUS

Bachelor of Computer Application

**BCA – Block Chain Technology – 3 Years
(IBM Collaboration)**

Curriculum and Syllabus Regulation 2021

Based on Choice Based Credit System (CBCS)

Effective from the Academic Year

2023-2024

**DEPARTMENT OF COMPUTER APPLICATIONS
School of Computing Sciences**

VISION

Our Vision is to be a center of excellence in IT education, training and research, aiming towards carrying out advanced research and development in information and software technologies, and in leveraging IT in specific domain areas enabling students to become innovators and entrepreneurs.

MISSION

To be a department of excellence in technical education, widely known for the development of competent and socially responsible IT professionals, entrepreneurs and researchers.

To promote professionals with knowledge and understanding, by providing them with latest developments in Computer Applications so that they contribute not only to the progress of software and its applications but even encompass the entire domain of computer technology.

To impart quality education for long lasting development and opportunity in an extensive career in the various fields of Computer science / Information Technology.

To increase innovative learning to the needs of Industry and Society

To be the source of bringing out globally competent pioneering computing professionals, researchers, innovators and entrepreneurs.

PROGRAM EDUCATIONAL OBJECTIVES (PEOS)

PEO1: Emerge as globally competent computer professionals in multidisciplinary domains.

PEO2: Excel as socially committed individual having an ethical values and empathy for the need of society

PEO3: Become an entrepreneur possessing a leadership skill that can provide solutions and develop software products.

PEO4: Involve in lifelong learning to adapt the latest technologies and advancements in the emerging areas of computer applications.

PEO5 : Provide technical & skill based quality training to the students in the field of Information technology

PROGRAM OUTCOMES (POS)

PO1: Computational Knowledge: Apply knowledge of computing fundamentals, computing specialization, mathematics, and domain knowledge appropriate for the computing specialization to the abstraction and conceptualization of computing models from defined problems and requirements.

PO2: Problem Analysis: Identify, formulate, research literature, and solve complex computing problems reaching Substantiated conclusions using fundamental principles of mathematics, computing sciences, and relevant domain disciplines.

PO3: Design /Development of Solutions: Design and evaluate solutions for complex computing problems, and design and evaluate systems, components, or processes that meet specified needs with appropriate consideration for public health and safety, cultural, societal, and environmental considerations.

PO4: Conduct Investigations of Complex Computing Problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO5: Modern Tool Usage: Create, select, adapt and apply appropriate techniques, resources, and modern computing tools to complex computing activities, with an understanding of the limitations.

PO6: Professional Ethics: Understand and commit to professional ethics and cyber regulations, responsibilities, and norms of professional computing practice.

PO7: Life-long Learning: Recognize the need, and have the ability, to engage in independent learning for continual Development as a computing professional.

PO8: Project management and finance: Demonstrate knowledge and understanding of the computing and management Principles and apply these to one's own work, as a member and leader in a team, to Manage projects and in multidisciplinary environments.

PO9: Communication Efficacy: Communicate effectively with the computing community, and with society at large, about complex computing activities by being able

to comprehend and write effective reports, design documentation, make effective presentations, and give and understand clear instructions.

PO10: Societal and Environmental Concern: Understand and assess societal, environmental, health, safety, legal, and cultural issues within local and global contexts, and the consequential responsibilities relevant to professional computing practice.

Program Specific Outcomes

PSO1: Be well versed in the various software and logical skills like Java Programming, Python Programming, Database concepts etc.

PSO2: Be competent in the fundamentals of software and hardware concepts and the emerging technologies in networks, recent trends in computer science field.

SEMESTER 1

CODE NO.	SUB CODE	COURSE	HOURS/WEEK			CREDITS	MAXIMUM MARKS		
			LECTURE	TUTORIAL	PRACTICAL		CA	SEE	TOTAL
LANG		TAMIL I/ HINDI / FRENCH	3	0	0	3	40	60	100
ENG		ENGLISH I	3	0	0	3	40	60	100
CORE1		RDBMS	4	0	0	4	40	60	100
CORE2		PROGRAMMING IN C	4	1	0	5	40	60	100
CORE3		MATHEMATICS I	5	0	0	5	40	60	100
CORE		PRACTICAL I - C	0	0	4	2	40	60	100
		RDBMS LAB	0	0	4	2	40	60	100
AECC		COMMUNICATION SKILLS	1	0	2	2	40	60	100
SEC		ORIENTATION/INDUCTIONPROGRAMME / LIFE SKILLS	-	-	-	-	-	-	-
			20	1	10	26			

All UG Programmes – PART I TAMIL
(BA/B.Sc./B.Com./BBA/BCA)

பாடக் குறியீட்டு எண்: 21LTA001

பருவம்-1, தமிழ்மொழிப்பாடம்-1, பகுதி-1, தகுதிப்புள்ளி: 3, வாரப்

பாட நேரம்: 3.

தாள்-1

இக்காலக் கவிதைகள் – உரைநடை – பண்பாடு – மொழித்திறன்

பாடத்திட்ட நோக்கம்:

மாணவர்களின் இலக்கிய நாட்டத்தை மேம்படுத்துதல், தற்கால தமிழ் இலக்கிய வகைமைகளான மரபுக்கவிதை, புதுக்கவிதை, உரைநடை ஆகியவற்றை அறிமுகப்படுத்துதல், தமிழர்தம் வாழ்வியல் நெறிகளையும் பண்பாட்டுச் செழுமைகளையும் இன்றைய தலைமுறையினர் அறியச் செய்தல், மாணவர்களுக்குத் தமிழைத் தவறின்றி எழுதுவதற்குத் தேவையான பயிற்சி அளித்து அவர்களின் மொழித்திறனை மேம்படுத்துதல், செய்யுளின் நலத்தைப் பாராட்டும் முறைமையை அறியச் செய்து அதன்வழி சிந்தனை வளத்தைப் பெருகச் செய்தல் என்பனவும் மேற்கண்டவழி மாணவர்களை ஆளுமை மிக்கவர்களாக உருவாக்கி, போட்டித்தேர்வுகளுக்குத் தயார் செய்து அவர்களுக்கு வேலைவாய்ப்பை உருவாக்குவதும் இந்தப் பாடத்திட்டத்தின் முக்கிய நோக்கமாகும்.

அலகு 1: மரபுக்கவிதை

9 மணி

நேரம்

1. பாரதியார் - பாரத தேசம் என்னும் தலைப்பில் ஆறு பாடல்கள்.
(பாடல் எண்கள் 1, 6, 7, 9, 12, 13)
2. பாரதிதாசன் - தமிழுக்கும் அமுதென்று பேர் என்னும் தலைப்பிலான கவிதை.
3. தேசிக விநாயகம் பிள்ளை - உடல் நலம் பேணல் என்னும் தலைப்பிலான கவிதை
4. முடியரசன் - காவியப் பாவை - "புண்படுமா" என்னும் கவிதை.

அலகு 2: புதுக்கவிதை

9 மணி

நேரம்

1. நா. காமராசன் - **கறுப்பு மலர்கள்** தொகுப்பில் **காகிதப்பூக்கள்** என்னும் தலைப்பிலான கவிதை.
2. அப்துல் ரகுமான் - **ஆலாபனை** தொகுப்பில் **போட்டி** என்னும் தலைப்பிலான கவிதை
3. ஈரோடு தமிழன்பன் - **ஒரு வண்டி சென்ரியு** தொகுப்பில் தேர்ந்தெடுக்கப்பட்ட சென்ரியு கவிதைகள்
4. ஆண்டாள் பிரியதர்ஷினி - **முத்தங்கள் தீர்ந்துவிட்டன** தொகுப்பில் **'இங்கே வரும் போது'** என்னும் தலைப்பிலான கவிதை

அலகு 3: உரைநடை

9 மணி

நேரம்

1. மாணாக்கரும் தாய்மொழியும் - திரு.வி.க.,
2. மன வலிமை வேண்டும் - மு.வரதராசனார்
3. செம்மொழித் தமிழின் சிறப்புகள்
4. பண்டைத் தமிழரின் சாதனைச் சுவடுகள்

அலகு 4: தமிழர் வாழ்வும் பண்பாடும்

9

மணி நேரம்

பண்பாடு - வாழ்வியல் முறை - அகம், புறம் - உணவு முறை - விருந்தோம்பல் - நம்பிக்கைகள் - விழாவும் வழிபாடும் - கலைகள் - கட்டடம் - சிற்பம் - ஓவியம் - இசை - கூத்து - தொழிலும் வணிகமும் - அறிவியல் நோக்கு.

அலகு 5: மொழித்திறன், இலக்கிய வரலாறு, இலக்கணம்

9 மணி நேரம்

1. எழுத்துப் பிழை, தொடர்பு பிழைகள்
2. வேற்றுமை இலக்கணம்
3. செய்யுள் நலம் பாராட்டல்
4. பாடல் தழுவிய இலக்கிய வரலாறு (மரபுக் கவிதை, புதுக்கவிதை, உரைநடை)

மொத்தம்: 45 மணி நேரம்

பார்வை நூல்கள்

1. **தமிழர் நாகரிகமும் பண்பாடும்**, டாக்டர் அ. தட்சிணாமூர்த்தி, ஜந்திணைப் பதிப்பகம், 2001.
2. **தவறின்றித் தமிழ் எழுதுவோம்**, மா. நன்னன், ஏகம் பதிப்பகம், 1999.

3. **தவறின்றித் தமிழ் எழுத** - மருதூர் அரங்கராசன், ஐந்திணைப் பதிப்பகம், 2003.
4. **தமிழ் இலக்கிய வரலாறு**, வரதராசன், மு., புது தில்லி : சாகித்திய அக்காதெமி, 2002.
5. **புதிய தமிழ் இலக்கிய வரலாறு**, நீல. பத்மநாபன், சிற்பி பாலசுப்ரமணியம், சாகித்திய அகாடெமி, 2007.
6. **செம்மொழி தமிழின் சிறப்பியல்புகள்** - முனைவர் மறைமலை இலக்குவனார்; <https://www.youtube.com/watch?v=HHZnmJb4jSY>
7. **பாடநூல் தேடலுக்கான இணையம்** - <https://archive.org/>

COURSE OBJECTIVE:

To introduce French language.

To enable the students to understand and to acquire the basic knowledge of French language with elementary grammar.

UNIT: I INTRODUCTION 09

Introduction-Alphabet-comment prononcer, écrire et lire les mots-base: les prénoms personnels de 1er, 2ème et 3ème personnes-conjugaisons les verbes être et avoir en forme affirmative, négative et interrogative.

UNIT II- LECON 1-309

Leçon 1 : Premiers mots en français- 2. Les hommes sont difficiles 3. Vive la liberté- Réponses aux questions tirées de la leçon-Grammaire: Les adjectifs masculins ou féminins-Les articles définis et indéfinis-Singuliers et pluriels.

UNIT III-LECON 4-609

Leçons 4. L'heure c'est l'heure 5. Elle va revoir sa Normandie 6. Mettez-vous d'accord groupe de nom-Réponses aux questions tirées de la leçon-Grammaire : A placer et accorder l'adjectif en groupe de nom-Préposition de lieu-A écrire les nombres et l'heure en français

UNIT :IV-LECON 7-9 09

Leçon 7. Trois visages de l'aventure, 8. A moi Auvergne 9. Recit de voyage-Réponses aux questions tirées de la leçon- Grammaire : Adjectif possessif- Les phrases au présent de l'indicatif-Les phrases avec les verbes pronominaux au présent.

UNIT :V- COMPOSITION :09

A écrire une lettre à un ami l'invitant à une célébration différente ex : mariage-A faire le dialogue- A lire le passage et répondre aux questions.

Total No of Hours : 45

TEXTBOOK :

Jack GIRARDER & Jean Marie GRIDLIG, <<Méthode de Français PANORAMA>>, Clé Internationale, Goyal Publication, New Delhi Edition 2014.

REFERENCE BOOKS:

DONDO Mathurin, "Modern French Course", Oxford University Press, New Delhi Edition 2014.

Nithya Vijayakumar get ready French grammar-Elementary Goyal publications, New Delhi Edition 2014.

I SEM LANG ENGLISH I – PROSE 3 0 0 3

COURSE OBJECTIVE:

To enable students to develop their communication skills effectively. To make students familiar with usage skills in English Language.

To enrich their vocabulary in English

To develop communicative competency.

Credit Hours

UNIT I 09

Dangers of Drug Abuse - Hardin B Jones

Tight Corners - E. V. Lucas

UNIT II 09

Futurology - Aldous Huxley

If You are Wrong, Admit it - Dale Breckenridge Carnegie

UNIT III 09

Industry - Dr.M.Narayana Rao & Dr.B.G.Barki

Turning Point of My Life - A.J Cronin

UNIT IV 09

Excitement - Mack R. Douglas

The Kanda Man Eater - Jim Corbett

UNIT V 09

Vocabulary and Exercises under the Lessons

Total No of Hours :45 Hours

COURSE OUTCOME

At the end of this course students will be able to, CO1 Examine the language of prose.

CO2 Utilize instructions on fundamentals of grammar

CO3 Develop their own style of writing after studying diverse prose essays.

CO4 Classify different essays on the basis of their types.

CO5 Critically comment on the textual content of prose.

TEXT BOOKS

English for Communication Enrichment: by Jeya Santhi June 2015.

Dr. M. Narayana Rao and Dr. B. G. Barki – Anu's Current English for Communication (AnuChitra). June 2012.

Dr. Ananthan , R. Effective Communication. Ed. Chennai : Anu Chithra Pub.2010.

WEB SOURCES:

<https://www.gradesaver.com/>

<https://www.enotes.com/>

<https://www.jstor.org/>

<https://www.sparknotes.com/>

RDBMS (IBM)

Course Objectives

1. Understanding Database Concepts and Understanding Database Storage
2. Entities and Relationships and The Relational Data Model
3. To learn Normalization, Database Design and Performance Tuning and Creating Database Objects
4. Introduction Manipulating Data, JDBC As the Fundamental Java API, JPA as the JAVA ORM API and Database Security
5. Understanding Database Backup and Restore and Introduction of MySQL

Unit-1

15

Understanding Database Concepts and Understanding Database Storage

Introduction Database Concepts, Tables, Primary Keys, Foreign Keys, Installation of SQLite, Installation of Docker based MySQL and DB2 database, Introduction Database Storage, Database normalization, Indexes and how they are used in databases, Configure non- clustered indexes and Configure clustered indexes.

Unit-2

15

Entities and Relationships and The Relational Data Model

Introduction Entities and Relationships, Entities and Their Attributes, Domains, Basic Data Relationships, Documenting Relationships, Dealing with Many-to-Many Relationships, Relationships and Business Rules, Data Modelling Versus Data Flow, Schemas, Introduction Relational Data Model, Understanding Relations, Primary Keys, Representing Data Relationships, Views and The Data Dictionary.

Unit-3

15

Normalization, Database Design and Performance Tuning and Creating Database Objects

Introduction Normalization, Translating an ER Diagram into Relations, Normal Forms, First Normal Form, Second Normal Form, Third Normal Form, Boyce–Codd Normal Form, Fourth Normal Form, Fifth Normal Form, Sixth Normal Form, Introduction Database Design and Performance Tuning, Indexing, Clustering, Partitioning, Creating Database Objects, Understand data definition language (DDL) and Choose appropriate data types.

Unit-4

15

Manipulating Data, JDBC As the Fundamental Java API, JPA as the JAVA ORM API and Database Security

Introduction Manipulating Data, Understand data manipulation language (DML), Introduction JDBC As the Fundamental Java API, JDBC basics, Introduction JPA as the JAVA ORM API,

From JDBC to JPA, Introduction Database Security, Sources of External Security Threats, Sources of Internal Threats, External Remedies and Internal Solutions.

Unit-5

15

Understanding Database Backup and Restore and Introduction of MySQL

Introduction Database Backup and Restore, Understand different types of backups, Define a backup and recovery strategy, Introduction of MySQL, Create Tables, Drop Tables, Insert Query, Select Query, Where Query, Update Query, Delete Query, Like Clause and MySQL Joins.

Course Outcomes

CO1: Understanding Database and Understanding Database Storage Concepts

CO2: Understanding Entities and Relationships and The Relational Data Model

CO3: Normalization, Database Design and Performance Tuning and Creating Database Objects

CO4: Manipulating Data, JDBC As the Fundamental Java API, JPA as the JAVA ORM API and Database Security

CO5: Understanding Database Backup and Restore and Introduction of MySQL

Text Books

1. A.Silberchatz, H.Korth, Subarshan, “Database System Concepts”, McGraw – Hill Higher Education, 5th Edition, 2012.
2. Elmasri, Navathe, “Fundamentals of Database Systems, Addison Wesley”, 3rd Edition, 2000.

Reference Books

1. Bipin C. Desai, “An Introduction to Database Systems”, Galgotia Publications Pvt. Limited, 2001.
2. G. V. Post - Database Management Systems Designing and Building Business Application - McGraw Hill International edition - 1999.
3. ArunMajumdar & Pritimoy, “Database Management Systems” Bhattacharya, 2007, TMH.
4. Gerald V. Post, “Database Management Systems” 3rd edition, TMH.

Web Links

1. <https://www.oreilly.com/library/view/relational-theory-for/9781449365431/ch01.html>
2. <https://www.ibm.com/topics/data-storage>
3. https://www.ibm.com/docs/en/informix-servers/12.10?topic=SSGU8G_12.1.0/com.ibm.ddi.doc/ids_ddi_163.html
4. <https://www.ibm.com/docs/en/i/7.2?topic=design-normalization>
5. <https://www.ibm.com/docs/en/data-studio/4.1.1?topic=databases-creating-database-objects>
6. <https://www.ibm.com/docs/en/informix-servers/12.10?topic=started-what-is-jdbc>
7. <https://www.ibm.com/docs/en/was-liberty/nd?topic=overview-java-persistence-api-jpa>
8. <https://www.ibm.com/docs/en/db2/11.1?topic=commands-backup-database>
9. <https://www.ibm.com/docs/en/ztpf/1.1.0.15?topic=concepts-mysql-server-overview>

COURSE OUTCOMES

On completion of this course, Students can able to,

CO1: Design simple applications using File, Pointers & Structures.

CO2: Create simple programs using Functions & Control Structures

CO3: Analyze the basic structure of C Language.

CO4: Apply the Concept of Input, Output Statements, Operators & expressions in C programs

CO5: Understand the basic tokens in C language

TEXT BOOK

1.E. Balaguruswamy, Programming in ANSI C, TMH publishing Company LTD, 2008.

REFERENCE BOOKS

H. Schildt, The Complete Reference, 4th Edition, TMH,2004.

Gottfried, B.S, Programming with C, fourth edition, TMH Pub.Co.Ltd, 2004.

Kanetkar Y, Let us C, BPB publications with ANSI & Turbo C, First edition, Pearson Education,New Delhi, 2008.

WEBSITES

www.w3schools.com

www.tutorialspoint.com

www.javapoint.com

www.geeksforgeeks.org

WEB SOURCES

https://www.vssut.ac.in/lecture_notes/lecture1424354156.pdf

https://www.unf.edu/~wkloster/2220/ppts/cprogramming_tutorial.pdf

CO4. Understand the key terminology, concept tools and techniques used in trigonometry

CO5. Apply the maxima and minima in detailed ways and the applications of partial differential equations.

TEXT BOOKS

P. Kandaswamy and K.Thilagavathy, Allied Mathematics paper I, 1st Semester, S.Chand Publishing Pvt. Ltd. 1st Edition, 2003.

S. Narayanan and T.K. Manickavasagam Pillai – Ancillary Mathematics, S.Viswanathan Printers, 1986, Chennai.

REFERENCE BOOKS

P.R. Vittal, Allied Mathematics, Margham Publications, 4th Edition 2009.

A. Singaravelu, Allied Mathematics, Meenakshi Agency, 2007.

P. Duraipandian and S.UdayaBaskaran, Allied Mathematics, Vol. I & II Muhil Publications, Chennai.

WEB SOURCES

https://books.google.co.in/books?id=4C4rDAAAQBAJ&printsec=frontcover&source=gbs_ge_summary_r&cad=0#v=onepage&q&f=false

<https://ncert.nic.in/ncerts/l/keep203.pdf>

<http://www.universityofcalicut.info/SDE/VI%20Sem.%20B.Sc%20Maths%20-%20Additional%20Course%20in%20lie%20of%20Project%20-Theory%20of%20equations%20&%20fuzzy%20set.pdf>

<https://www.math.ust.hk/~machas/numerical-methods.pdf>

https://www.researchgate.net/publication/321825504_Differential_Calculus

COURSE OBJECTIVE

- ✓ To introduces to write programs using basic concepts of C programming.
- ✓ To practices the student to write simple programs using function.
- ✓ To improves the logical thinking in C programming.

LIST OF EXPERIMENTS

1. Write a program in C to find whether the given string is Palindrome or not.
2. Write a program in C to count vowels, consonants etc.
3. Write a program in C to find the factorial of a number.
4. Write a program in C to find the given number is prime or not.
5. Write a program in C to find the value of NPR
6. Write a program in C to find the GCD of two numbers.
7. Write a program in C to find the Fibonacci Series
8. Write a program in C to find Matrix Addition/Subtraction.
9. Write a program in C to find Matrix Transpose.
10. Write a program in C for swapping 2 numbers.
11. Write a program in C to open, read and close the file
12. Write a program in C to read name and marks of n number of students and store them in a file.

COURSE OUTCOMES:

On completion of this course, Students can able to,

CO1: Design simple applications using File, Pointers & Structures.

CO2: Create simple programs using Control Structures

CO3: Develop C Programs using Array.

CO4: Develop C Programs using Functions.

CO5: Develop simple programs using operators & Expression.

TEXT BOOK

1.E. Balaguruswamy, Programming in ANSI C, TMH publishing Company LTD, 2008.

REFERENCE BOOKS

H. Schildt, The Complete Reference, 4th Edition, TMH,2004.

Gottfried, B.S, Programming with C, fourth edition, TMH Pub.Co.Ltd, 2004.

Kanetkar Y, Let us C, BPB publications with ANSI & Turbo C, First edition, Pearson Education,New Delhi, 2008.

WEBSITES

www.w3schools.com

www.tutorialspoint.com

www.javapoint.com

WEB SOURCES

https://www.vssut.ac.in/lecture_notes/lecture1424354156.pdf

https://www.unf.edu/~wkloster/2220/ppts/cprogramming_tutorial.pdf

http://mars.tekkom.dk/w/images/4/42/6272_cnote.pdf

<https://www.slideshare.net/gauravjuneja11/c-language-ppt>

RDBMS (IBM) Lab

Course Objectives

- ✓ To introduces to write programs using basic concepts of RDBMS programming.
- ✓ To practices the student to write mysql query.
- ✓ To improves the logical thinking in RDBMS programming.

List of Experiments

1. Installation Process of IBM DB2
2. Installation Process of MYSQL WORKBENCH
3. Consider following database and draw ER diagram COLLEGE DATABASE:
 - (i) STUDENT (USN, SName, Address, Phone, Gender)
 - (ii) SEMSEC (SSID, Sem, Sec)
 - (iii) CLASS (USN, SSID)
 - (iv) SUBJECT (Subcode, Title, Sem, Credits)
 - (v) IAMARKS (USN, Subcode, SSID, Test1, Test2, Test3, FinallA)
4. Consider the database for an organisation. Write the queries for the following
 - (i) create the database by using SQL
 - (ii) select the current database by using SQL
 - (iii) Create the following tables by using SQL
 - a) employee (emp_no, emp_name, DOB, address, Date of Joining, mobile_no, dept_no, salary).
 - b) department (dept_no, dept_name, location).
5. Consider the database for an organisation. Write the queries for the following
 - (i) INSERT minimum 10 records in the employee table and 4 department records in department table using SQL
 - (ii) UPDATE any 3 fields in employee table by using SQL

(iii) ALTER the employee table by adding the email column by using SQL

6. Consider the database for an organisation. Write the queries for the following

(i) VIEW all the columns in the table by using SQL

(ii) Return a particular record using WHERE command in SQL

7. Consider the database for an organisation. Write the queries for the following

(i) Make use of JOIN command and join the above two tables by using SQL

(ii) Make of LEFT JOIN command and join the above two tables by using SQL

(iii) Make of RIGHT JOIN command and join the above two tables by using SQL

(iv) Make of FULL JOIN command and join the above two tables by using SQL

8. Consider the database for an organisation. Write the queries for the following

(i) Return the number of employees in each department by grouping them based on the department and sort them in the ascending order based on the count of employees in each department using SQL.

9. Consider the database for an organisation. Write the queries for the following

(i) DELETE any 3 records in the employee table using SQL

(ii) TRUNCATE employee table and department table by using SQL

(iii) DELETE all the tables along with database by using SQL

10. Consider the database for an organisation. Write the queries for the following

(i) Create a PRODUCT table with the following fields(product_id, product_name, price)

(ii) From the following table, write a SQL query to calculate total price of all products.

(iii) From the following table, write a SQL query to calculate the average price amount of all orders.

(iv) From the following table, write a SQL query to find the maximum price product.

(v) From the following table, write a SQL query to find the minimum price product

COURSE OUTCOMES:

On completion of this course, Students can able to,

CO1: Installation of mysql workbench.

CO2: Create Entity Relationship diagram

CO3: Develop mysql queries.

CO4: Way of create database.

CO5: Develop simple programs using mysql.