ಬೆಂಗಳೂರು ವಿಶ್ವವಿದ್ಯಾಲಯ
ಜ್ಞಾನಭಾರತಿ, ಬೆಂಗಳೂರು-೫೬

ಸಂಖ್ಯೆ:ಎಸಿಎ-2/ NEP-2020 /Open Elective List/2022-23 ದಿನಾಂಕ 24.01.2023

ಸುತ್ತೋಲೆ

ವಿಷಯ: ಎರಡನೇ ವರ್ಷದ Physical Education ಹಾಗೂ Computer Science ಗೆ ಸಂಬಂಧಿಸಿದಂತೆ ಸ್ನಾತಕ ಪದವಿಯ ಕೋರ್ಸುಗಳ ಮುಕ್ತ ಆಯ್ಕೆ ವಿಷಯಗಳ (Open Elective) ಪಟ್ಟಿಯನ್ನು ಪ್ರಕಟಿಸುವ ಕುರಿತು -

ಉಲ್ಲೇಖ: 1. ಸರ್ಕಾರದ ಆದೇಶ ಸಂಖ್ಯೆ. ಇಡಿ 260 ಯುಎನ್‌ವಿ 2021 (ಭಾಗ-1), ದಿನಾಂಕ: 13.08.2021, 21.08.2021, 31.08.2021 ಮತ್ತು 12.10.2021.
2. ವಿಶ್ವವಿದ್ಯಾಲಯದ ವಿವಿಧ ಅಧ್ಯಯನ ಮಂಡಳಿಗಳು ಮತ್ತು ನಿಕಾಯ ಸಭೆಗಳ ಶಿಫಾರಸ್ಸುಗಳು.
3. ದಿನಾಂಕ: 21.09.2022 ರಂದು ಜರುಗಿದ ಶೈಕ್ಷಣಿಕ ಪರಿಷತ್ತಿನ ಸಭೆಯ ನಡಾವಳಿ.
4. ವಿ.ವಿ.ಸುತ್ತೋಲೆ ಸಂಖ್ಯೆ.ಎಸಿಎ-2/ NEP-2020 /Open Elective List/2022 ದಿನಾಂಕ: 05.09.2022.
5. ಸಂಖ್ಯೆ.ಎಸಿಎ-2/ NEP-2020 /Open Elective List/2022-23 ದಿನಾಂಕ 27.09.2022
6. ಮಾನ್ಯ ಕುಲಪತಿಯವರ ಅನುಮೋದನೆ ದಿನಾಂಕ: 23.01.2023

ಉಲ್ಲೇಖ (5)ರಲ್ಲಿ ಓದಲಾದ ದಿನಾಂಕ 27.09.2022ರ ವಿಶ್ವವಿದ್ಯಾಲಯದ ಸುತ್ತೋಲೆಯನ್ನು ಮುಂದುವರೆಸುತ್ತಾ, NEP-2020ರ ಮಾರ್ಗಸೂಚಿಯ ಅನುಸಾರ ರಚಿಸಿರುವ ವಿವಿಧ ಸ್ನಾತಕ ಪದವಿ ಕೋರ್ಸುಗಳ **3 ಮತ್ತು 4ನೇ ಸೆಮಿಸ್ಟರ್‌ಗಳಿಗೆ** ಮುಕ್ತ-ಆಯ್ಕೆಯ ವಿಷಯಗಳನ್ನು 2022-23ನೇ ಶೈಕ್ಷಣಿಕ ಸಾಲಿನಿಂದ ಜಾರಿಗೆ ಬರುವಂತೆ ಈಗಾಗಲೇ ಪ್ರಕಟಿಸಲಾಗಿದ್ದು, ಕೆಲವು ವಿಭಾಗಗಳ ಮುಕ್ತ-ಆಯ್ಕೆಯ ವಿಷಯಗಳನ್ನು ತಡವಾಗಿ ವಿಭಾಗಗಳಿಗೆ ತಲುಪಿಸಿದ ಕಾರಣ ಬಾಕಿ ಇರುವ ಕೋರ್ಸುಗಳಿಗೆ ಮುಕ್ತ-ಆಯ್ಕೆಯ ವಿಷಯಗಳನ್ನು ಈ ಕೆಳಕಂಡಂತೆ ಪ್ರಕಟಿಸಲಾಗಿದೆ:

Sl No	Subject/Course	OPEN ELECTIVE TOPICS (To be chosen across the faculty)			
		III SEMESTER		IV SEMESTER	
1	**Physical Education**	1	Health and Safety Education	1	Sports Journalism
		2	Adventure Sports	2	Self Defense
2	**Computer Science**	1	Fundamentals of HTML & CSS	1	Database Management Syllabus

ಮುಂದುವರೆದು, ಬೆಂಗಳೂರು ವಿಶ್ವವಿದ್ಯಾಲಯದ ವ್ಯಾಪ್ತಿಯಲ್ಲಿ ಬರುವ ಎಲ್ಲಾ ಸಂಯೋಜಿತ ಕಾಲೇಜುಗಳ ಪ್ರಾಂಶುಪಾಲರುಗಳು, ವಿಶ್ವವಿದ್ಯಾಲಯವು ಪ್ರಕಟಿಸಿರುವ ಮುಕ್ತ-ಆಯ್ಕೆಯ ವಿಷಯಗಳ ಪಟ್ಟಿಯನ್ನು **(Open Elective Subjects)** ದ್ವಿತೀಯ ವರ್ಷದ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ **Across the Faculty** ಯಿಂದ ಆಯ್ಕೆ ಮಾಡಿಕೊಳ್ಳಲು ಅವಕಾಶ ಕಲ್ಪಿಸಿ, ಸದರಿ ಆಯ್ಕೆ ಮಾಡಿದ ಮುಕ್ತ-ಆಯ್ಕೆಯ ವಿಷಯಗಳನ್ನು ವಿಶ್ವವಿದ್ಯಾಲಯದ UUCMS ಪೋರ್ಟಲ್‌ನಲ್ಲಿ ಅಪ್‌ಲೋಡ್ ಮಾಡಲು ತಿಳಿಸಲಾಗಿದೆ.

ಬೆಂಗಳೂರು ವಿಶ್ವವಿದ್ಯಾಲಯದ ವ್ಯಾಪ್ತಿಯಲ್ಲಿ ಬರುವ ಎಲ್ಲಾ ಸಂಯೋಜಿತ ಕಾಲೇಜುಗಳ ಪ್ರಾಂಶುಪಾಲರುಗಳು ಈ ಸುತ್ತೋಲೆಯನ್ನು ಕಟ್ಟುನಿಟ್ಟಾಗಿ ಪಾಲಿಸಲು ಸೂಚಿಸಲಾಗಿದೆ.

ಕುಲಸಚಿವರು 27.1.23

ಗೆ,
ಬೆಂಗಳೂರು ವಿಶ್ವವಿದ್ಯಾಲಯಕ್ಕೆ ಸಂಯೋಜನೆಗೊಂಡಿರುವ ಕಾಲೇಜುಗಳ ಪ್ರಾಂಶುಪಾಲರುಗಳಿಗೆ.

ಪ್ರತಿಗಳು:
1. ಎಲ್ಲಾ ನಿಖಾಯಗಳ ಡೀನರುಗಳಿಗೆ, ಬೆಂಗಳೂರು ವಿಶ್ವವಿದ್ಯಾಲಯ, ಬೆಂಗಳೂರು.
2. ಕುಲಸಚಿವರು (ಮೌಲ್ಯಮಾಪನ) ಬೆಂಗಳೂರು ವಿಶ್ವವಿದ್ಯಾಲಯ, ಬೆಂಗಳೂರು.
3. ಸಿಸ್ಟಂ ಅನಾಲಿಸ್ಟ್, E-Governance ಕೋಶ - ಸುತ್ತೋಲೆಯನ್ನು ವಿ.ವಿ. ಅಂತರ್ಜಾಲದಲ್ಲಿ ಪ್ರಕಟಿಸುವ ಸಲುವಾಗಿ
4. ಕುಲಪತಿಯವರು/ಕುಲಸಚಿವರು/ ಕುಲಸಚಿವರು (ಮೌಲ್ಯಮಾಪನ)/ವಿತ್ತಾಧಿಕಾರಿಯವರು-ಇವರುಗಳ ಆಪ್ತಕಾರ್ಯದರ್ಶಿಗಳಿಗೆ, ಬೆಂ. ವಿ. ಬೆಂ.

Semester III
OPEN ELECTIVE PAPER-1
Title of the Course:
Health and Safety Education

(BA/BSc/BCom/BBA/BCA & all other UG Courses)

Course outcomes

On completion of the Course the student will be able to:

- Know the meaning of health and factors influencing it.
- Learn causes and prevention of communicable diseases.
- Learn the safety measures to be taken in playgrounds, schools and at home.

Number of Theory Credits	Number of lecture hours/semester	Number of Practical Credits	Number of Practical hours/ semester
1	14	2	56

Contents of the Course
1 – 0 – 2

THEORY — **14**

UNIT 1 – INTRODUCTION

- Meaning and definition of Health.
- Factors influencing Health:
  - Heredity,
  - Environment
  - Habits
- Physical and mental health- meaning and dimensions
- Personal Hygiene – Skin, Mouth, Teeth, Nails, Clothing, Shoes, Food, and Exercise,
- Sleep and Relaxation

56

UNIT 2- COMMUNICABLE DISEASE

- Meaning and Definition of Communicable Disease
- Causes of Communicable diseases.
- Spread of Infections.
- Preventive measures of Malaria, Filaria Typhoid, Cholera, Dysentery, Small Pox, whooping Cough, Tuberculosis, AIDS and COVID.

UNIT 3- PUBLIC HEALTH AND SAFETY

- Meaning of public health,
- General methods of sanitation
- Safety measures and precaution: at home, street, play ground
- Role of college in environmental conservation and sustainable development.
- Health and safety in daily life.
- Supply of drinking water and methods of water purification

Practical

- First Aid
- First aid requirements during Sports Competition
- First aid during emergencies: SCA, Fractures, Breathlessness, Cramps, Sprains, Strain.
- Preparation of reports.

** The practical classes shall be adapted to the physically challenged students as per requirement.*

Formative Assessment			
Assessment Type	**Internal Assessment**	**Semester Exam**	**Total**
Theory	**20**	**40**	**60**
Practical	**20***	**20**	**40**
Total			**100**

*Internal marks can be assigned for field work, projects, written tasks, practical tasks etc.

References

- Bucher. C. A (1979) Foundations of Physical Education (5th edition Missouri CV Mosby Co.)
- Coalter, F. (2013) Sport for Development: What game are we playing? Routledge.
- Puri .k. Chandra S.S (2005) "Health and Physical Education" New Delhi : Surjeet Publications.
- Thomas D Fahey and others. Fit and well: 6th Edition New York : McGraw Hill Publishers, 2005

Semester III
OPEN ELECTIVE PAPER - 2
Title of the Course:
Adventure Sports

(BA/BSc/BCom/BBA/BCA & all other UG Courses)

Course outcomes

On completion of the Course the student will be able to:

- Understand the meaning and importance of Adventure sports.
- Learn the various types of adventure sports, the equipment and resources required to practice these sports.
- Learn the safety measures to be taken while practicing adventure sports.
- Be aware of the job opportunities in this area of sports.
- Practically perform selected adventure sports.
- Teach, plan and organize various adventure sports.
- Learn to record and prepare reports.

Number of Theory Credits	Number of lecture hours/semester	Number of Practical Credits	Number of Practical hours/ semester
1	14	2	56

Contents of the Course 1 – 0 – 2	
Theory **Unit-1 Introduction, Definition of Adventure sports** • Definition, Meaning and Importance of Adventure Sports • History- Development, Scope, and Objectives **Unit-2 Types of Adventure sports** • Water and Aero sports – Canoeing, rafting, kayaking, scuba diving, snorkeling, surfing, paddling. • Aero sports: Ballooning, Hang gliding, Paragliding, Parasailing, skydiving • Mountaineering – Trekking, Rock Climbing, Wall climbing, Bouldering. **Unit-3 Safety, recent trend and carrier opportunity in adventure sports.** • Safety measures and first aid • Recent Trends in Adventure Sports • Job Opportunities in Adventure Sports **Unit-4** **Organizations,** Mountaineering, Rock climbing, trekking, single rope, Tire bound. **Practical** • Fitness, Conditioning, Warming Up, Specific Exercises, Cooling Down • Practical, teaching, demonstration, training, technical training. • Planning and Organizing-Mountaineering, Trekking, Rock Climbing, Para Sailing, Water Sports, etc. • Records and Report Preparation	**14** **56**

** The practical classes shall be adapted to the physically challenged students as per requirement.*

Formative Assessment			
Assessment Type	**Internal Assessment**	**Semester Exam**	**Total**
Theory	**20**	**40**	**60**
Practical	**20***	**20**	**40**
Total			**100**

*Internal marks can be assigned for field work, projects, written tasks, practical tasks etc.

REFERENCES

- Adventure Sports: World's Most Popular 89 Adventure Sports Paperback Import, 13 February 2020, by Mahesh Sharma (Author)
- Adventure Tourism and Sports 1st Edition (English, Hardcover, Negi Jagmohan)
- The world of adventure sports, By: Berne, Emma Carlson, Lonely Planet
- Kids, Jepson, Ian(Illustrated by) Part of the Lonely Planet Kids series
- Sports, Games and Adventure Sports (English, Hardcover, Ghosh C N)
- Kilpatrick all for adventure, "All for adventure", Irrene/ Hall, Susan(ILT)
- Kalpana Swaminathan "Adventure sports".

Semester *IV*
Open Elective Paper-1
Title of the Paper
Sports Journalism

(BA/BSc/B.Com/BBA/BCA & all other UG Courses)

Number of Theory Credits	Number of lecture hours/semester	Number of Practical Credits	Number of Practical hours/ semesters
2	28	1	28 Hours

Content of Theory Course (2-0-1) 3 Credits	56 Hours
THEORY **UNIT 1 - INTRODUCTION** ➢ Meaning and Definition of Journalism ➢ Sports Journalism: Meaning, Definition and Scope ➢ Media: Types, Nature, Significance ➢ Journalist: Role, Responsibilities, Ethics and Hazards in journalism ➢ National and international sports news Agencies	**28**
UNIT 2 - MASS MEDIA ➢ Sports Section in Mass Media: Print, Electronic and Online ➢ Sports Coverage: Live and Recorded ➢ Sports Matters (content): News, Panel Discussions, Interviews, Special Stories. ➢ Organization of Press Meet. ➢ Basic Sports Journalism Terminology	
UNIT 3 - WRITING AND REPORTING ➢ Brief review of Olympic Games, ➢ General news report, Sports Events, Competitions and their Analysis ➢ Skill and Techniques of Writing ➢ Drafting and Reporting - Language, Vocabulary, Dialect, Spelling, Figure of Speech	**28**
PRACTICAL ● Field Visits and Reporting of Major Sports Events ● Interviews of Elite Sports Personalities ● Project on Local Sports Tournaments and Sports Photography ● Notable National and International Sports Journalists and their contribution to Sports Journalism ● New Trends and Technologies in Sports Coverage ● Mock Interview/Record/Project	

Formative Assessment			
Assessment Type	**Internal Assessment**	**Semester Exam**	**Total**
Theory	**20**	**40**	**60**
Practical	**20***	**20**	**40**
Total			**100**

Semester IV
OPEN ELECTIVE PAPER - 2
Title of the Course:
Self Defence

(BA/BSc/B.Com/BBA/BCA & all other UG Courses)

Course outcomes

On completion of the Course the student will be able to:

- Understand the meaning and need of self-defense.
- Understand the fitness requirements to implement self-defense.
- Learn the basic techniques of selected combative sports.
- Learn the defensive techniques applied from combative sports.
- Implement survival techniques during emergencies.
- Learn to record and prepare reports.

** The practical classes shall be adapted to the physically challenged students as per requirement.*

Number of Theory Credits	Number of lecture hours/semester	Number of Practical Credits	Number of Practical hours/ semester
1	14	2	56

Contents of the Course 1 – 0 – 2	
Theory **Unit-1 Introduction** • Meaning and Importance of Self Defence. • Principles of Self Defense • Meaning and Characteristics of combative sports – Karate, Kick boxing, Judo, Wrestling. Unit-2 • Fitness requirements for self-defense. • Ethical considerations of applications of self-defensive skills. • Difference between armed and unarmed self defence. • Self defence instructor. • Career opportunities of a self defence instructor. **Practical** • General conditioning and self-defense specific conditioning • Basic techniques of karate, kickboxing, judo and wrestling • Applications of techniques of combative sports for self-defense. • Self-defense techniques for specific situations: chain snatching, knife or stick attack, holding from back or front etc. • Self-defense using equipment such as stick (lathi), nan-chaku etc. • Record and report preparation.	**14** **56**

Formative Assessment			
Assessment Type	**Internal Assessment**	**Semester Exam**	**Total**
Theory	**20**	**40**	**60**
Practical	**20***	**20**	**40**
Total			**100**

*Internal marks can be assigned for field work, projects, written tasks, practical tasks etc.

References

- "Darren Levine has my unqualified support and gratitude for his contributions to Krav Maga." –ImiLichtenfeld, founder of Krav Maga
- In the Name of Self-Defense:: What it costs. When it's worth it, 603 pages, Kindle Edition, first published July 2, 2014
- Self Defense: The Ultimate Guide To Beginner Martial Arts Training Techniques (Martial Arts, Self Defense For Women, Self Defense Techniques Book 1) Kindle Edition
- Taekwondo: A Step-by-Step Guide to the Korean Art of Self-Defense Paperback – 15 Jan 2003
- The Self-Defense Handbook (English, Paperback, Fury Sam)
- The Walking Stick Method of Self Defence Paperback – Import, 14 August 2018

Recommendations

1. The various papers in the subject of Physical Education, Sports and Yoga of undergraduate programmes, in core discipline, specific discipline elective, Health Education and Skill Enhancement Courses, shall be taught (theory and practical) by Physical Education Faculty, qualified as per the UGC guidelines

2. The Committee recommends that from 2022-23 and there on, the Physical Education, Sports & Yoga Discipline Core Subject (DSC) shall be considered under Science Stream (B.Sc.) as it is in other states.

3. Physical Education Faculty shall be enriched with additional knowledge through short term courses/workshops/refresher/orientation/training programmes as per requirements.

4. The committee recommends inclusion of the subjects for the competitive examinations conducted for the civil services under the central and state level.

5. Health, Wellness and Yoga (Value based paper under SEC) paper shall be taught by Physical Education Faculty only.

6. In addition to Practical, one hour of theory (for Physical Education, Sports and Yoga) under Skill Enhancement Course shall be ensured at the first semester of all Under Graduate courses.

7. Appropriate Sporting and Yoga infrastructure and necessary Books/reference materials shall be ensured at all Higher Education Institutions (HEIs).

8. Recruitment of Faculty shall be ensured in all Government, Aided, Constituent and Private HEIs.

9. Open Elective Papers and Skill Enhancement Papers in Physical Education, Sports and Yoga shall be made available in all HEIs across all UG Programs (Arts, Science & Commerce, i.e.BA/BSc/BCom/BBA/BCA & all other UG Courses) starting from the academic year 2021-22. Board of Studies (BoS) & Board of Examination (BoE) shall be constituted immediately in all the universities.

10. The existing workload of the Physical Education Faculty for preparing college sports teams (training and coaching hours) for University/State/National level competitions shall also be considered along with the workload of papers made available under NEP.

11. HEIs shall be guided and empowered to align with NSQF (National Skills Qualification Framework) and enter into MoUs with NSDC (National Skill Development Corporation) and other organizations to ensure employability.

12. Along with Discipline Specific Core papers, appropriate measures shall be ensured to conduct practical and theory assessments for Open Electives and Skill Enhancement Courses.

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SOUND MIND IN A SOUND BODY.

Open Elective courses offered by the Department of Computer Science

Open Elective 3: Fundamentals of HTML & CSS

Course Code: CSOE04	Fundamentals of HTML & CSS
Course Credits: 03	Hours/Week: 03
Total Contact Hours: 42	Formative Assessment Marks: 40
Exam Marks: 60	Exam Duration:

Introduction to HTML

History of HTML - What you need to do to get going and make your first HTML page - What are HTML Tags and Attributes? - HTML Attributes - How to differentiate HTML Document Versions- Introduction and Advantages of HTML 5 - Limitations of HTML 4 - First HTML5 Document - Overview of New Features of HTML5.

HTML-Basic Formatting

HTML Basic Tags - HTML Formatting Tags - HTML Color Coding - Div and Span Tags for Grouping -Table: , Lists: Unordered Lists - Ordered Lists - Definition list, Images: Image and Image Mapping, HTML-Iframe : Attributes Using - Iframe as the Target, Hyperlink: URL - Uniform Resource Locator - URL Encoding. Semantic elements: Header - Navigation - Section & Articles - Footer – Aside

Web Forms

Web Forms: HTML 5 Global Attributes - Displaying a Search Input Field - Utilizing Date and Time Input Fields - Number Inputs - Selecting from a Range of Numbers - Selecting Colors - Creating an Editable Drop-Down - Requiring a Form Field - Displaying Placeholder Text - Disabling Autocomplete - Restricting Values.

CSS

Introduction: CSS Versions History - Benefits of CSS - What CSS3 Is and How It Came to Be - CSS3 Is Modular - CSS3 Is Not HTML5- Browser-Specific Prefixes, Syntax: CSS Syntax - single Style Sheets - Multiple Style Sheets - Value Lengths and Percentages, Selectors: ID Selectors - Class Selectors - Grouping Selectors - Universal Selector - Descendant / Child Selectors - Attribute Selectors, CSS-Color Background Cursor, Text Fonts, -Lists Tables, transformations.

Readings:

1. HTML5 and CSS3 visual quick start guide 7th edition

2. Black Book, HTML 5, Dreamtech Press
3. Ralph Moseley and M. T. Savaliya, Developing Web Applications, Wiley-India

Open Elective courses offered by the Department of Computer Science

Open Elective 4: Database Management System

Course Code: CSOE04	Database Management Systems
Course Credits: 03	Hours/Week: 03
Total Contact Hours: 42	Formative Assessment Marks: 40
Exam Marks: 60	Exam Duration:

Course Outcomes (COs):

After completing this course satisfactorily, a student will be able to:

- Understand relevance of Databases and DBMS.
- Appreciate the purpose of SQL and learn to use SQL DDL and DML commands
- Write SQL for Join operations and aggregation.
- Obtain insights about transactions and apply all the SQL DDL, DML commands

Content	Hours
Unit – 1	
Introduction to Databases & DBMS: **Introduction**: File Systems, File storage and its limitations, The Database Approach, Database Management Systems, DBMS advantages and limitations, **DBMS Concepts**: Database Schema, Meta-Data/ Data Dictionary, Constraints, **Relational Data Model Concepts:** Relation, Attributes, Tuples, Domain, Cardinality, Degree. Keys – Candidate key, Primary key, Composite key, foreign key.	12 Hrs
Unit – 2	
Introduction to SQL: SQL and its features, SQL Data types, **DDL:** Create tables (with constraints), Alter tables, **DML:** Insert, Update, Delete Operations, **Queries:** Simple Queries, select with WHERE clause, ORDER BY clause and aggregate functions, Using operators like BETWEEN , IN , ANY , ALL and computations in queries, Simple Queries using all clauses	10 Hrs
Unit – 3	
More on SQL: Joins, types of joins , queries with GROUP BY clause, queries with HAVING clause, views and their relevance, creating and using views, simple example queries for joining tables and using GROUP BY and HAVING clause	10 Hrs
Unit – 4	

Case Study: | 10 Hrs

The University Database has the following tables:

STUDENT(usn, name, address, date_of_birth, program_cd, semester)
DEPARTMENT(dept_cd, dept_name, HOD_cd) (HOD_cd is foreign key which references **faculty_cd** of **FACULTY** table)
FACULTY(faculty_cd, name, address, date_of_join, dept_cd)
Program(program_cd, program_name, dept_cd) (Each Department offers multiple programmes eg: BCA, MCA are offered by CS department)

Write SQL DDL and DML statements for the following:

1. Create all the tables defining primary keys and foreign keys.
2. Add the column email_id to the STUDENT table
3. Insert minimum three tuples in each of the tables.
4. Update the date_of_birth of a specific student.
5. Delete the data of a specific faculty.
6. Display all the programmes taught by Computer Science department
7. Display all the faculties who teach in the Math department.
8. Display the number of faculty members in each department
9. Display the student usn, name along with the programme (program name) he is studying
10. Display all the department names along with the names of their HODs.

Reference Books:

1. Elmasri, Navathe , Fundamentals of Database Systems (5th Edition), Pearson
2. Alan Beaulieu, Learning SQL – 2nd Edition, O'Reilly Publications

Web Resources:

1. https://ncert.nic.in/textbook/pdf/keip107.pdf
2. https://ncert.nic.in/textbook/pdf/keip108.pdf