

5th and 6thSEM
SKILL ENHANCING COURSE(SEC)
SUBJECT: GOODS AND SERVICES TAX
TITLE: GOODS AND SERVICES TAX
Class Duration: 16 Weeks with 2 Hours a week = 32 Hrs
Marks: Theory 30 + Internal Assessment 20 = 50

Course objective: The objective of learning this paper is to educate students about the purpose of indirect taxation. The need for levying tax is to raise revenue in order to meet the public expenditure, improve competitiveness of the goods and services, thereby improving the GDP rate too.

Teaching Methodology: Lecture method to understand various concepts of GST structure, charts of GST rates, demo on online filing of GST tax returns and other forms.

Course Outcome: -

Understand basic concepts in GST framework

A brief introduction to Goods and Services Tax, levy of tax in different states

Practical experience of electronic filing and filling of various GST forms

	Unit 1:Goods and Service Tax	16Hrs
1.1	Introduction Goods and service tax, Structure, Vision and Mission, Powers and Functions, Conceptual framework, Guidelines and architecture to integrate with GST System, GSTN , Distribution of GST among state.	
1.2	SGST,CGST,UGST and ,IGST(simple problems only)	
1.3	Levy of GST in Intra and Inter State (simple problems only)	
	Unit 2 : Filing Returns	16Hrs
2.1	Filling and filing GST returns, steps in filing forms	
2.2	Verifying and vouching	
2.3	Appeal, penalty for late filing	

Reference Books:

Sl no	Title of the book	Name of the author	Name of the publisher	Edition	Year of publishing
1.	Goods and service tax	H.C.Mehrotra	Sahitya Bhavan Publication	Revised Edition	2018-19

2.	Goods and service tax	A.P.Philip	Soba publications	1 st Edition	2018
3.	Goods and Service Tax	V.S.Datey	Taxman Publications	Revised Edition	2019

5th and 6thSEM

SEC Paper Code:

SUBJECT: Personal Investment Planning

TITLE: Personal Investment Planning

Class Duration: 16 Weeks with 2 Hours a week = 32 Hrs

Marks: Theory 30 + Internal Assessment 20 = 50

Course objectives:

1. To understand the basic concepts of Personal Investment
2. To provide knowledge on different investment avenues
3. To make students to aware of right time to invest and start Investment

Course outcome:

1. Students will be able to understand the importance of Money Management
2. Students will be able to develop investment decision
3. Students will be able to identify better options for Investment

Teaching Methodology:

1. Classroom Lecture
2. Group Discussion
3. Case Studies
4. Assignments

UNIT – I: Introduction to Personal Investment Planning [16hrs]

- 1.1. Concept of Personal Investment Planning – Objectives of Personal Investment
- 1.2. Investment Planning – where to invest, how to invest and when to invest
- 1.3. Investment Process; Stages in Investment
- 1.4. Common Errors in Investment
- 1.5. Factors to be considered while Making Investment
- 1.6. Qualities of Successful Investors
- 1.7. Investment Ideas of Warren Buffet, Benjamin Graham and John Templeton

UNIT – II: Investment Avenues – Financial and Real Estate [16hrs]

- 2.1. Equity Market Instruments - Equities, Debentures, Bonds
- 2.2. Money Market Instruments – Treasury Bills, Commercial papers, Certificate of Deposits
- 2.3. Mutual Funds – Equity scheme, Debt scheme, Balanced Scheme, Sector specific schemes
- 2.4. Life Insurance and General Insurance
- 2.5. Real Estate – Real Estate Investment Trust
- 2.6. Precious Objects
- 2.7. Non -Marketable Securities – Bank Deposits, Post office Deposits, Company Deposits, Provident Fund Deposits.

Reference:

Sl. No.	Titled of the Books	Name of the Author	Name of the Publisher	Edition	Year of Publishing
1	Fundamentals of Investments	Alexander, Gordon J, Sharpe, William F, Bailey, Jefferey V	Prentice Hall of India	3rd	2001
2	Security Analysis and Portfolio Management	Punithavathy Pandian	Vikash Publishing House P. Ltd. NewDelhi	2 nd	
3	The Random Walk Guide to Investing: Ten Rules for Financial Success	Burton G. Malkiel	W.W. Norton		2003
4	Investment Management	Singh, Preeti	Himalaya Publishing House		2010
5	Rich Dad Poor Dad'	Robert Kiyosaki and Sharon Lechter	Warner Books Ed		2000
6	Personal Financial Planning	Benedict Koh, Wai Mun Fong	Prentice Hall Publishers	4 th	2012
7	The Millionaire Next Door	Thomas J. Stanely & William D. danko	Simon and Schuster		1996

Assignment Topics: (Answer any 5 from the following)

1. Identify different types of Mutual Fund
2. Prepare a report on, 'Perception of Individuals on Investment' with 25 samples
3. Write a detailed note on Real Estate Investment Trusts (REIT)
4. Write profile of Life Insurance Corporation of India
5. Prepare a best financial plan of Mr. X
6. Write best tax savings investment avenues for an Individual

SUBJECT: SEC 5th or 6th Sem.
(for Non Commerce and BBA Students) ACCOUNTING
TITLE: Basics of Accounting
Class Duration: 16 Weeks with 2 Hours a week = 32 Hrs.
Marks: Theory 30 + Internal Assessment 20 = 50

Course objective: Basics of Accounting would help a non-commerce student to have an idea to prepare final accounts of a concern so as to know the gross profit and the net profit. This will help in taking business decision on continuing with the same project or not.

Teaching Methodology:

1. Chalk and board is inevitable to teach working paper.
2. Power Point Presentations for theory contents.
3. Assignments, group discussions and presentations.

Course outcome:

- | | | |
|----|---|----------------------|
| 1. | a student to know the accounting concepts and conventions. | This paper will help |
| 2. | paper, a student will have an idea about objectives and importance of accounts. | After learning this |
| 3. | student will have an idea about how to prepare a simple final accounts of a small firm. | A non - commerce |

	Unit 1: Introduction to Accounting	16Hrs
1.1	Meaning of Accounting, Need for Accounting, Users of Accounting Information	
1.2	Objectives and Advantages of Accounting	
1.3	Accounting Concepts and Conventions	
1.4	Accounting Standards, Importance of Accounting Standards	
1.5	GAAP, Accounting Cycle, Account Equations	
	Unit 2: Final Accounts of Sole Trading Concern	16Hrs
2.1	Meaning and need for Final Accounts	
2.2	Format of a Trading Account and Profit and Loss Account, Balance Sheet, Features of a Balance Sheet, difference between Trading and Profit and Loss Account and a Balance Sheet	
2.3	Simple problems on final accounts of sole trader.	

Reference Books:

Sl. no	Title of the book	Name of the author	Name of the publisher	Edition	Year of publishing
1.	Financial Accounting-I	S.P.Jain and K.L. Narang	Kalyani	4 th	2019
2.	Financial Accounting-I	B.R Ananthan, H.R. Appannaiah, P.N. Reddy and	Himalaya Publishing House	1 st	2006

		Srinivasa Putty			
3.	First year accountancy	Any author	----	-----	Latest Edition

Note: The latest edition of all the books referred above should be read.

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**SKILL ENHANCING COURSE (SEC) 3rd and 4th sem
(For Non B Com and BBA students)
SUBJECT: ENTREPRENEURSHIP
TITLE: ENTREPRENEURSHIP DEVELOPMENT
Class Duration: 16 Weeks with 3 Hours a week = 32 Hrs
Marks: Theory 30 + Internal Assessment 20 = 50**

Objectives: To enable students to understand the basic concepts of entrepreneurship and prepare a business plan to start an enterprise / Small Scale Industry

Teaching Methods: Class Room Teaching, Group discussion, Activity: Case analysis

Course Outcome (CO): Upon completion of the course the student shall be able to:

CO1: Classify and analyze the role played by tiny, ancillary, cottage and small scale industries in the development of Indian economy.

CO2: Develop a business plan to own an enterprise.

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|------------|--|---------------|
| 1.0 | Unit 1. Entrepreneurship | 10 Hrs |
| 1.1 | Introduction, Meaning & Definition of Entrepreneurship, Entrepreneur & Enterprise- Evolution of entrepreneurship in India- Characteristics & Functions of Entrepreneurs | |
| 1.2 | Factors influencing Entrepreneurship – Pros and Cons of being an Entrepreneur – Qualities of an Entrepreneur–Types of Entrepreneurs – Entrepreneur V/s Professional Managers. | |
| 2.0 | Unit 2. Small Scale Industries | 10Hrs |
| 2.1 | Meaning & Definition – Product Range – Capital Investment – Ownership Patterns – Meaning and importance of Tiny Industries, Ancillary Industries, Cottage Industries. | |
| 2.2 | Role played by SSI in the development of Indian Economy. Problems Faced by SSI's and the steps taken to solve the problems – Policies Governing SSI's. | |
| 2.3 | Business Plan- Meaning – Importance- Preparation of Business Plan. | |
| 3.0 | Unit 3. Formation of Small Scale Industries | 12 Hrs |
| 3.1 | Business opportunity, scanning the environment for opportunities, evaluation of alternatives and selection based on personal competencies, financial assistance through SFC's, SIDBI, Commercial Banks, IFCI – Non-financial assistance from DIC, SISI, AWAKE, KVIC. | |

- 3.2 Steps involved in the formation of a small business venture: location, clearances and permits required, formalities, licensing and registration procedure.

Topics for assignment to enhance the skill - to be written in a separate book (Any four)

1. List out the name, address, nature of business, capital and number of employees of at least ten business enterprises.
2. Visit District Industrial Centre and Collect information about incentives offered to small scale units.
3. Visit KSFC and collect information about financial assistance offered by them to SSIs.
5. Design a questionnaire to assess the entrepreneurial aptitude.
6. Visit four agricultural entrepreneurs and write a report.
7. Write a feasibility report for a new enterprise
8. Chart showing financial assistance with rate of interest and tax concessions both direct and indirect available to SSI units in India.

Reference Books:

1. Vasanth Desai, Management of Small Scale Industry, HPH
2. Mark J. Dollinger, Entrepreneurship –Strategies and Resources, Pearson Edition.’
3. Dr.Venkataramana, Entrepreneurial Development, SHB Publications
4. C.S.V.Murthy, Small Scale Industries & Entrepreneurial Development
5. UdaiPareek and T.V. Rao, Developing Entrepreneurship
6. N.V.R Naidu, Entrepreneurship Development, I.K International Publishers
7. Vasant Desai, Small Business Management & entrepreneurship

SKILL ENHANCING COURSE (SEC) 3rd and 4th sem

(For Non B. Com &BBA students)

SUBJECT: TAXATION

TITLE: BASIC TAX SYSTEM

Class Duration: 16 Weeks with 3 Hours a week = 32 Hrs

Marks: Theory 70 + Internal Assessment 30 = 100

Objective: The objective of learning this paper is to educate students about the purpose of taxation. The need for leaving tax is to raise revenue in order to meet the public expenditure, improve competitiveness of the goods and services, thereby improving the GDP rate too.

Teaching Methodology: Lecture method to understand various concepts of Income tax, charts of GST rates, demo on online filing of various tax returns and other forms.

Course Outcome: Upon completion of the course, the student shall be able to:

CO1. Apply the various provisions of income tax act and can compute under the different heads of income.

CO2. Recognize the imposition of GST in India and the various components related to GST.

CO3. Classify various forms of registration procedures and identify who are liable for registration under GST Act.

1.0	Unit 1.Introduction to Income Tax	10Hrs
1.1	Introduction, Meaning, Finance Act	
1.2	Basic Concepts- Assessee, Assessment Year, Previous Year, Person's Income	
1.3	Residential Status, Exempted Incomes	
1.4	Various Heads of Income-Salary, House Property, Business and Profession, Capital Gains (Simple problems only)	
2.0	Unit 2.Goods and Service Tax	10Hrs
2.1	Meaning, Definition, Types	
2.2	Various Components of GST	
2.3	Indirect Tax Structure in India	
2.4	Registration of Persons –Types of Registration- Cancellation of Registration (Simple problems on SGST, CGST, IGST)	
3.0	Unit 3. Assessment Procedure	12Hrs
3.1	E-filing of IT Returns	
3.2	E- Payment of Tax, PAN, TAN (Tax deduction and Collection Account Number)- (Introduction to Quick books)	

Topics for assignment to enhance the skill - to be written in a separate book (Any Five)

1. Prepare chart showing GST rates
2. Computation of income from salary using imaginary figures
3. Mention ten exempted incomes under section 11
4. Filing and filing of IT return forms
5. PAN format
6. Procedure for cancellation of Registration under GST

Reference Books:

Sl no	Title of the book	Name of the author	Name of the publisher	Edition	Year of publishing
1.	Income tax law and practice	H.C.Mehrotra	SahityaBhavan Publication	33 rd Edition	2017-18
2.	Income tax law and practice	V.K.Singhania	Taxman Publications	41 st Edition	2018-19
3.	Goods and Service Tax	V.S.Datey	Taxman Publications	Revised Edition	2017

**ST.PHILOMENA'S COLLEGE (AUTONOMOUS), MYSURU
(AFFILIATED TO UNIVERSITY OF MYSORE)
DEPARTMENT OF
BUSINESS ADMINISTRATION**

OPEN ELEVTIVE PAPER FOR UG PROGRAMS
SUBJECT: MANAGEMENT (SEC)
TITLE: HUMAN RESOURCE MANAGEMENT
Class Duration: 16 Weeks with 2 Hours a week = 32 Hrs
MARKS THEORY 30+ INTERNAL ASSESSMENT 20= 50

OBJECTIVE OF THE PAPER:

To enable the students to understand the dynamics of human resource management functions and Roles in corporate enterprises.

TEACHING METHOD:

Lecture method with examples, ICT to make the concepts clear.

COURSE OBJECTIVES:

1. To demonstrate and understand the concepts of Human Resource Management.
2. To explore the sources of Recruitment and Selection Procedure.

COURSE LEARNING OUTCOME:

CLO	After the completion of this course the student will be able to	Cognitive level
CLO-01	Understand the concepts of Human Resource Management.	Understand
CLO-02	Identifying the sources of Recruitment.	Analyse

Unit 1 Human Resource Management -

**16
Hrs**

- 1.1 Introduction
- 1.2 Meaning
- 1.3 Definition ,Scope
- 1.4 Importance
- 1.5 Role of HR managers
- 1.6 Functions of HR
HRM v/s HRD

Unit 2 Recruitment and Selection

16Hrs

- 2.1** Meaning, Process and Types
- 2.2** Interviews – Objectives, Steps and Types
- 2.3** Training and Development

Books for References:

- 1. Human Resource Management – K S Ashwathappa
- 2. Human Resource Management – T. V. Rao
- 3. Human Resource Management – V. S. P. Rao
- 4. Human Resource Management – SubbaRao

Books for further References:

- 1. Human Resource Management – C.B. Gupta and M.V. Murthy
- 2. Human Resource Management – B.J Lathi and paragNarkhede
- 3. Personnel Management – Rudrabasavaraj
- 4. Personnel Management and Industrial Relations – C.B. Mamoria

**ST. PHILOMENA'S COLLEGE (AUTONOMOUS)
SKILL ENHANCEMENT COURSE**

Title: Sports and Fitness

Class duration: 2 Hours per week= 30 hrs

Marks: Theory (30) + Internal Assessment (20) = 50

Introduction:

Any activity that uses physical exercise or skills competitively under a set of rules. Physical fitness is a state of health and well being and, more specifically, the ability to perform aspects of sports, occupations and daily activities. Physical fitness is generally achieved through proper nutrition, moderate, vigorous exercise and sufficient rest.

Learning objectives of the course are:

- i. To provide an environment for physical development of the students
- ii. To provide opportunity to the student to execute their talent in sports field
- iii. To promote sportsmanship among students by organising various sports activities.

The expected outcomes of the course are:

- i. Increased awareness about the importance of sports and fitness in human life.
- ii. Developing and maintaining good relationships between athletes, teams and student bodies, faculty, administrators and the community.
- iii. Stay away from the health issues and Develop endurance

	Unit 1: foundation of sports and fitness	15Hrs
1.1	Sports meaning, definitions, importance. Sports personality development.	
1.2	Role of Sports in the Development of an Individual, and Qualities of Sports Person.	
1.3	Physical Education: Meaning, Definition of Physical Education, Aim And Objectives Of Physical Education, Scope Of Physical Education	
1.4	Health: Meaning and Definition of Health, Different Dimension of Health, Need and Importance of Health Education.	
1.5	Concept of Physical Fitness, Components of Motor Fitness.	
1.6	Sports Training: Meaning, Aim, Characteristics, Principles, and Types of Training Methods.	
	Unit 2: Anatomy and Physiology	05Hrs
2.1	Meaning Of Anatomy and Physiology, Effects of Exercises on Respiratory, Digestive, Circulatory, Muscular, and Skeletal Systems.	
	Unit3: Practical (sports and games)	10Hrs
2.3	History and Origin, Development, Fundamental Skills, Advanced Skills, Rules and regulations and Organizations of the sports and games. Handball, Throw Ball, Basketball, Shuttle Badminton, Football, Hockey, Volleyball, Kabaddi, Cricket, Kho-Kho, Chess, Carom, Table Tennis, Karate, Swimming, Aerobics, and Athletics .	

REFERENCES:

- Everything you always wanted to know about sports. By Mickey herskowitz and steve perkins
- Gupta, A. P. (2010). Anatomy and physiology. Agra: Sumit Prakashan.
- Moorthy, A. M. (2014). Anatomy physiology and health education. Karaikudi: Madalayam Publications.
- Sharma, R. D. (1979). Health and physical education, Gupta Prakashan.
- Frank, H. &Walter, H., (1976). Turners school health education. Saint Louis: The C.V. Mosby Company.
- Giam, C.K &The, K.C. (1994). Sport medicine exercise and fitness. Singapore: P.G. Medical Book..
- Sharkey, B. J.(1990). Physiology of fitness, Human Kinetics Book.
- Singh, H. (1984).Sports training, general theory and methods. Patials: NSNIS.
- Dick, W. F. (1980).Sports training principles. London: Lepus Books.
- Matvyew, L.P. (1981).Fundamental of sports training. Moscow: Progress Publishers.

- Bucher, C. A. (n.d.) Foundation of physical education. St. Louis: The C.V. Mosby Co.
- Sharman, J. R. (1964). Introduction to physical education. New York: A.S. Barnes & Co.
- Book of Rules of Games & Sports Dr.A.K. Srivastava
- The Sports Rules Book: Essential Rules, Terms, and Procedures for 54 Sports A: [Tom Hanlon](#)
- The Sports Rules Book-3rd Edition Essential Rules, terms, and procedures for 54 Sports. Human Kinetics with Thomas Hanlon

Note: A student can choose any one game or sport

ST.PHILOMENA'S COLLEGE (Autonomous) MYSORE
DEPARTMENT OF COMPUTER SCIENCE AND APPLICATIONS
Open Elective(OE) Paper for UG Programmes
Title of the paper : Computer networking

Conditions : This paper is offered as an Open Elective to the CBSC UG Students other than computer science . students can opt for this paper once in any of the six semester during the three year course.

PAPER STRUCTURE

Papers	Type	Teaching Hours per week(16 weeks)			Examination Scheme			
		Theory	Practical/ Skill Development	No. of Credits	Exam Duration	Theory Max. Marks	IA Max. Marks	Total Marks
COMPUTER NETWORKING	OE	02	02	03	2hrs	50	50	100
WEB DESIGNING	OE	02	02	03	2hrs	50	50	100
COMPUTER GRAPHICS	OE	02	02	03	2hrs	50	50	100
ANDROID APPLICATION PROGRAMMING	OE	02	02	03	2hrs	50	50	100
ARTIFICIAL INTELLIGENCE	OE	04	-	03	2hrs	50	50	100
DATABASE MANAGEMENT SYSTEM	OE	04	02	03	2hrs	50	50	100

SOFTWARE TESTING	OE	04	02	03	2hrs	50	50	100
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Open Elective(OE) Paper for UG Programmes
Title of the paper : WEB DESIGNING

Conditions : This paper is offered as an Open Elective to the CBSC UG Students other than computer science . students can opt for this paper once in any of the six semester during the three year course.

COURSE OBJECTIVES (COs)

CO No.	Course Objectives
	On completion of the course the student will be able to
CO 1	To learn basics of Web Designing
CO 2	To learn Web Page Designing
CO 3	To quickly be able to understand the different parts of a web page
CO 4	Learn how to setup your site
CO 5	To be able to create a site independently

COURSE LEARNING OUTCOMES

CLOs No.	Course Learning Outcomes(CLOs) On completion of the course the student will learn to	PSOs Addressed	CDLs
CLO1.	plan out a website	PSO-7	Apply
CLO2	Design a layout for web pages and your entire site	PSO-3	Design
CLO3	Design web pages, including colors, text, images, and more	PSO-3	Design
CLO4	Design web page to add advanced features to your website including special effects and widgets	PSO-3	Design

PAPER STRUCTURE

Papers	Type	Teaching Hours per week(16 weeks)			Examination Scheme			
		Theory	Practical/ Skill Development	No. of Credits	Exam Duration	Theory Max. Marks	IA Max. Marks	Total Marks
WEB DESIGNING	OE	02	02	03	2hrs	50	50	100

UNIT -1

12hrs

WEB publishing,
HTML tag concept,
<head><body>,
URL, hyperlinks tags,Image basics,,
alt attribute, Hspace, Vspace, Height,
Width Image as link.

Presentation and layout:

Text alignment: Center,left,right,
Multicol,Color: settings,bgcolor, Foreground color,
Tables: TD, TR, Rowspan, Colspan,cell padding, cellpadding,
Table within table

Types of Lists:Ordered lists, Unordered lists, Nested Lists

Frame:Row,Col,%Split up of rows,cols,Frame targeting,

ImageMap

UNIT -II

20hrs

HTML form elements:form, Methods post/get, Text box, Password.,
Button, Drop down list box, Radio button, Check boxes, Submit
/reset button

Script Basics:Syntax,Variables,Primitives types,Operators,Control
Statements, Looping Statements, Functions.

JavaScript in HTML:<script> tag,External File format,Inline Code,

Browser Object Model: Window Object, Document Object,
Location Object, Navigator Object, Screen Object.

Events:-Type of Events ,All Form Element Events(textbox,
combobox, radiobutton, form)

String Functions,Match Function,Exception Handling,

Laboratory/Training:2 hrs/week

Practical Session based on Theory concepts

PRACTICAL / SKILL DEVELOPMENT:02 hours per week

1. IA COMPONENTS : Theory -20 marks+Practical/Skill-30 Marks=50

Theory IA Components:

IA TEST	HOME ASSIGNMENT	QUIZ/VIVA/PRESENTATION	ATTEDANCE	TOTAL	REDUCED to
40	20	20	20	100	20

2. Practical / Skill IA Components:

End Semester Exam -20+Pr./Skill IA Test-05+Pr. /Skill Record-05

REFERENCE BOOKS

1. HTML Complete Reference
2. HTML 4
3. HTML, Javascript & perl By Inav Bayross

**Open Elective(OE) Paper for UG Programmes
Title of the paper : Computer Networking**

Conditions : This paper is offered as an Open Elective to the CBSC UG Students other than computer science . students can opt for this paper once in any of the six semester during the three year course.

COURSE OBJECTIVES (COs)

CO No.	Course Objectives
	On completion of the course the student will be able
CO 1	To learn the basics of computer networking
CO 2	Understand Network Architecture & Protocols.
CO 3	Know about TCP/IP Architecture.
CO 4	Understand Layers of the OSI Model.
CO 5	Know about different types of layer and protocols.

CLOs	Course Learning Outcomes(CLOs)	PSOs	CDLs
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No.	On completion of the course the student will learn to	Addressed	
CLO1.	Describe the basis and structure of an abstract layered protocol model.	PSO-1	Understand
CLO2.	Independently understand basic computer network technology.	PSO-1	understand
CLO3.	Identify the different types of network topologies and protocols.	PSO-1	Understand
CLO4.	Enumerate the layers of the OSI model and TCP/IP. Explain the function(s) of each layer.	PSO-1	Understand
CLO5	Identify the different types of network devices and their functions within a network	PSO-1	Understand
CLO6	Familiarity with the basic protocols of computer networks, and how they can be used to assist in network design and implementation	PSO-1	Analysis
CLO7.	Understand how the Internet works today.	PSO-1	Understand

PAPER STRUCTURE

Papers	Type	Teaching Hours per week(16 weeks)			Examination Scheme			
		Theory	Practical/ Skill Development	No. of Credits	Exam Duration	Theory Max. Marks	IA Max. Marks	Total Marks
COMPUTER NETWORKING	OE	02	02	03	2hrs	50	50	100

SYLLABUS

UNIT 1

12hrs

Chapter 1 : Basics of computer networking

- 1.1 Definition of computer networks.
- 1.2 Necessary of computer networks and advantages.
- 1.3 Transmission media-Guided lines.
- 1.4 Study of guided media.
 - 1.4.1 Coaxial cable.
 - 1.4.2 STP cable.
 - 1.4.3 Network media optical cable.
- 1.5 Transmission media-Unguided.
 - 1.5.1 Microwave technology.
 - 1.5.2 Satellite communication.

- 1.6 Network topology.
- 1.7 Types of network topology.
 - 1.7.1 Point to point topology.
 - 1.7.2 Bus, star, Ring, Mesh topology.
 - 1.7.3 Special topology.
- 1.8 Switching technology.
 - 1.8.1 Message switching.
 - 1.8.2 Circuit switching.
- 1.9 The OSI model.
- 1.10 Network components.
 - 1.10.1 Network configuration.

UNIT II

10hrs

- Chapter 2: LAN, WAN and network components.**
- 2.1 Wide area network.
- 2.2 Wide area network architecture.
- 2.3 Introduction to wireless LAN.
- 2.4 Wireless LAN characteristics.
- 2.5 Bluetooth technology.
- 2.6 Introduction to internet.
- 2.7 Internet Architecture.
- 2.8 Internet service provider.
- 2.9 Bridges, Routers, Switches, Gateway.

UNIT III

10hrs

- CHAPTER-3: Network Architecture & Protocols.**
- 2.1 Network Architecture concepts.
 - 2.1.1 Basic concepts of layering.
 - 2.1.2 Services.
- 2.2 Layers of the OSI Model.
 - 2.2.1 The Application layer.
 - 2.2.2 The presentation layer
 - 2.2.3 The session layer.
 - 2.2.4 The transport layer.
 - 2.2.5 The network layer.
 - 2.2.6 Data link layer.
 - 2.2.7 The physical layer.
- 2.3 The TCP/IP Architecture.
 - 2.3.1 Message Encapsulation.
 - 2.3.2 The Application layer.
 - 2.3.3 The transport layer.
 - 2.3.4 The Internet layer.
- 3.6 Multiplexing.
 - 3.6.1 FDM, TDM and wave length division multiplexing.

Laboratory/Training:2 hrs/week

- 1) Introduction to network components**
- 2) Installation of network card & other hardware devices of system**
- 3) Various network media types:**
 - a) Study of colour combination**
 - b) Cable with RJ-45 connectors**
- 4) Design small local area network(VPN)**
- 5) a) Configure your server & install the DNS server service**
 - b) Configure a DNS client**
- 6) a) Implement an organizational unit (OU) structure**
 - b) Locate objects in active directory**
 - c) Move objects to active directory**
- 7) a) Create & configure local users & groups.**
 - b) Implement & configure your rights for server clients.**
- 8) Increase the number the users, set the delay & compare the performance of network.**
- 9) By using LAN trainer kits build the bus, star, ring topology scenario & identify the performance.**

Open Elective(OE) Paper for UG Programmes
Title of the paper : Data Base Management System

Conditions : This paper is offered as an Open Elective to the CBSC UG Students other than computer science . students can opt for this paper once in any of the six semester during the three year course.

CO No.	Course Objectives
	On completion of the course the student will be able
CO 1	Understand the basic concepts and the applications of database systems
CO 2	To understand the different issues involved in the design and implementation of a database system
CO 3	To study the physical and logical database designs, database modeling, relational, hierarchical, and network models
CO 4	Understand the relational database design principles
CO 5	Master the basics of SQL and construct queries using SQL
CO 6	Familiar with database storage structures and access techniques.
CO 7	To design and build a simple database system and demonstrate competence with the fundamental tasks involved with modeling, designing, and implementing a DBMS
CO 8	Improve the database design by normalization.

CLOs No.	Course Learning Outcomes(CLOs) On completion of the course the student will learn to	PSOs Addressed	CDLs
CLO1.	Understand the applications of dbms,difference between filesystems vs dbms, identify the data models ,understand dbms structure	PSO-1	Understand
CLO2.	Identifies the entity ,attributes, identify entity relationship diagrams.	PSO-5	Illustrate
CLO3	Learn ddl cmds, dml cmds, queries	PSO-7	Apply
CLO4	Identifies the functional dependencies,decompostions:loss less join ,dependency preserving decomposition	PSO-5	Illustrate
CLO5	Understands the need of normalization, Normal forms I,II,III,IV BCNF is learnt	PSO-1	Understand
CLO6	Identifies the file organization methods access methods to store the data	PSO-5	Illustrate

PAPER STRUCTURE

Papers	Type	Teaching Hours per week(16 weeks)			Examination Scheme			
		Theory	Practical/ Skill Development	No. of Credits	Exam Duration	Theory Max. Marks	IA Max. Marks	Total Marks
DATABASE MANAGEMENT SYSTEM	OE	04	02	03	2hrs	50	50	100
UNIT I	Basic Concepts and Architecture <ul style="list-style-type: none"> •Basic concepts and definitions: Data, Information, Data versus Information, Metadata, System Catalog, Data items, Records, Files •Data Dictionary: Components of Data dictionary, Active and Passive data dictionary •Database, Database system, Functions and Responsibilities Database administrator •File oriented system versus database system: Advantages and disadvantages of File system, Advantages and disadvantages of Database system, Comparison of File system and Database system •Database system architecture: Schemas and Instances, Three level database architecture, Data independence, Mappings, Functions of DBMS, Data models 							8hrs
UNIT II	Data Modeling using Entity Relationship Model <ul style="list-style-type: none"> •The Entity-Relationship Model: Entity sets, Relationship sets, Attributes •Constraints: Mapping cardinalities, Keys, Participation constraints •Entity-Relationship Diagrams: Symbols and their meaning in E-R diagram •Entity-Relationship Design Issues: Use of Entity sets versus Attributes, Use of Entity sets versus Relationship sets, Binary versus n-ary Relationship sets, Placement of Relationship attributes 							8 hrs

UNIT III	<ul style="list-style-type: none"> • Database implementation using SQL • Basic datatypes in SQL • Creating and Managing Tables: CREATE TABLE and ALTER TABLE commands, INSERT, UPDATE and DELETE commands, Viewing data in the Tables, eliminating duplicate rows when using a select statement, Sorting data in a table, Creating a table from a table, Inserting data into a table from another table. • Creating and Dropping Integrity Constraints: Primary key, Foreign key, Unique key, Not Null, Check • Computations done on table data: Arithmetic operators, Logical operators, Range searching, Pattern matching • Database Functions: Scalar and Group functions (Aggregate functions, Numeric functions, String functions), Conversion functions(To_CHAR(), TO_DATE()) • Normalization and Normal Forms: Need for normalization, 1NF, 2NF, 3NF, BCNF, Properties of Multi-valued dependencies, 4NF, Join dependency, 5NF 	8 hrs
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Text Book(s):

1. "Database Systems : Concepts, Design and Applications", S K Singh, Pearson Education
2. "Database System Concepts", 5th Edition, Silberschatz, Korth, Sudarshan, McGraw Hill Publication
3. "SQL, PL/SQL The programming language of oracle", 3rd revised edition, Ivan Bayross, BPB Publication

Open Elective(OE) Paper for UG Programmes

Title of the paper : Software Testing

Conditions : This paper is offered as an Open Elective to the CBSC UG Students other than computer science . students can opt for this paper once in any of the six semester during the three year course.

COURSE OBJECTIVES (COs)

CO No.	Course Objectives
	On completion of the course the student will be able to
CO 1	Employ correct testing terminology throughout the testing process.
CO 2	Execute specific software tests with well defined objectives and targets.
CO 3	Apply various testing techniques, including domain, code, fault, usage and model-based.
CO 4	Execute program and test evaluations
CO5	Perform a complete testing process, taking into account practical considerations.

COURSE LEARNING OUTCOMES

CLOs No.	Course Learning Outcomes(CLOs) On completion of the course the student will learn to	PSOs Addressed	CDLs
CLO1.	Various test processes and continuous quality improvement	PSO-1	understanding
CLO2.	Understand types of errors and fault models	PSO-1	Understanding
CLO3.	Understand the use of various test tools	PSO-1	Understanding
CLO4	Apply Methods of test generation from requirements	PSO-7	Apply
CLO5	Apply of software testing techniques in commercial environments	PSO-7	Apply

PAPER STRUCTURE

Papers	Type	Teaching Hours per week(16 weeks)			Examination Scheme			
		Theory	Practical/ Skill Development	No. of Credits	Exam Duration	Theory Max. Marks	IA Max. Marks	Total Marks
SOFTWARE TESTING	OE	04	02	03	2hrs	50	50	100
UNIT I	Software testing principles Definition testing, Need for testing Psychology of testing ,Testing economics ,SDLC and Testing ,Verification & Validation ,Quality Assurance ,Quality Control, Software Models							9 hrs
UNIT II	Testing strategies and types White box testing techniques : Statement coverage ,Branch Coverage ,Condition coverage ,Decision/Condition coverage ,Multiple condition coverage , Dataflow coverage , Automated code coverage analysis , Inspections , Walkthroughs , Code Review Boundary value analysis ,Robustness testing ,Equivalence partitioning ,Syntax testing ,Finite state testing ,Levels of testing ,Unit, Integration and System Testing ,Compatibility Testing ,Domain Testing ,Adhoc Testing ,Use of Requirements ,Traceability Matrix Integration Testing Waterfall Top-down ,Bottom up ,Big bang ,Sandwich							12 hrs

	<p>System and Performance Testing Types of system testing, Functional and non-functional testing , Acceptance Testing , Setting entry and exit criteria for phases and typical product release scenarios , Basic factors governing performance testing , Methodology for performance testing , Tools for performance testing</p> <p>Regression Testing : Purpose , Timing , Choice of tests , Smoke tests , Best practices</p> <p>Usability Testing : Factors in usability testing , Aesthetics testing , Accessibility testing , Tools for usability testing</p> <p>Black box testing techniques</p>	
UNIT III	<p>Test Management and Automation</p> <p>□ Test Planning , Test Management , Test Process , Test Reporting , Test Automation , Factors to consider in automation , Challenges in test automation , Test Metrics , Product Metrics , Process Metrics , Progress Metrics , □ Use of metrics in ascertaining product release</p> <p>Importance of documentation : □ Need for Software Documentation , Different types of documentation , Understanding task orientation , Analyzing users , Writing user scenarios , User informational needs , Document goals , User work motivations , User analysis checklist , Constructing a task list , Categorization , Writing steps as actions , Task analysis</p>	11 hrs

1. Modules 1-Manual Testing

- a. Fundamentals of Software Testing
- b. SDLC, STLC (Methodologies)
- c. Verification, Validation
- d. Functional Testing
- e. Non-Functional Testing
- f. Other Types of testing
- g. System Testing
- h. Black Box White box
- i. Test management
- j. Test cases
- k. Risk Analysis
- l. Defect life cycle

2. Module 2-QTP

- a. Introduction
- b. Quick Test Window
- c. Capture and playback principle
- d. Recording modes
- e. Runmode

- f. Object Repository
- g. Synchronization
- h. Measuring transaction
- i. Check points
- j. Parameterization
- k. Function Libraries
- l. Working with Actions
- m. Automation Framework

PRACTICAL PART

Oracle 9i

Introduction to DBMS and RDBMS

Database Design, ER diagram and Normalization

Oracle Architecture

Introduction to SQL and SQL*PLUS

SQL_DDL(Data Definition Language)

SQL_DML(Data Retrieval)

SQL_DML(Data Manipulation Language)

Open Elective(OE) Paper for UG Programmes
Title of the paper : Computer Graphics and Multimedia
Theory 2 hrs & Practical 2hrs /week

Conditions : This paper is offered as an Open Elective to the CBSC UG Students other than computer science . students can opt for this paper once in any of the six semester during the three year course.

CO No.	Course Objectives
	On completion of the course the student will be able
CO 1	To introduce to the students the concepts of computer graphics
CO 2	To introduce fundamental concepts and theory of computer graphics
CO 3	It presents the most important drawing algorithm, two-dimensional transformation; Clipping, filling and an introduction to 3-D graphics
CO 4	Knowledge of multimedia and its different file formats

CLOs No.	Course Learning Outcomes(CLOs) On completion of the course the student will learn to	PSOs Addressed	CDLs
CLO1.	Understand the basics of computer graphics, different graphics systems and applications of computer graphics.	PSO-1	understand
CLO2.	Discuss various algorithms for scan conversion and filling of basic objects and their comparative analysis.	PSO-1	Analyze
CLO3.	Use of geometric transformations on graphics objects and their application in composite form.	PSO-7	Apply
CLO4.	Extract scene with different clipping methods and its transformation to graphics display device.	PSO-7	Apply
CLO5.	Understand the basic concepts of multimedia and its different file formats	PSO-1	understand

PAPER STRUCTURE

Papers	Type	Teaching Hours per week(16 weeks)			Examination Scheme			
		Theory	Practical/ Skill Development	No. of Credits	Exam Duration	Theory Max. Marks	IA Max. Marks	Total Marks
COMPUTER GRAPHICS	OE	02	02	03	2hrs	50	50	100

UNIT-1

10 hrs

Raster Graphics Algorithm for 2D primitives

Introduction - Output Technology - Raster and Vector display system, Software portability and Graphic Standards, Conceptual Framework of Interactive Graphics

Scan converting – lines, circles, Filling rectangles, pattern filling, Thick primitives, Line Style, Pen Style, Clipping in a Raster World, Clipping lines, Generating characters.

UNIT-II

12hrs

2D Graphics

2D transformations, Homogenous coordinates, Matrix representation of 2D transformation, Composition of 2D transformation, Window to Viewport transformation

3D Graphics

Matrix representation of 3D transformation, Composition of 3D transformation, Transformations as change in coordinate systems

UNIT-III

10hrs

Multimedia

Introduction, Multimedia data streams, sound and audio file formats, images and graphics file formats and optical storage media

Text Books

1. Foley J.D Van Dam A. Fundamentals of interactive computer Graphics, Addison Wasley.
2. Multimedia Computing, communication and application by Rolfsteinmetz, Redson Education

Reference Books

1. Hearn. D Baker P.M COMPUTER GRAPHICS (PHI)
2. Rogers D.F Adam J: Mathematical Elements for Computer Graphics, McGraw Hill
3. Harrington D: Computer Graphics –A programming approach, Tata McGraw Hill
4. Foley, J.D Van Dam A, Feiner S.K. and Hughes; Computer Graphics principles and practice, Addison Wesley

5. Giloi W.K: Interactive computer graphics, prentices Hall
6. Newman W, Sproul R.F: Principles of Interactive computer Graphics, McGraw Hill
7. Rogers D.F Procedural Elements of computer Graphics.
10. Satish Gupta, Main Stream Multimedia, Van No stand 1993
11. Robert Jennings, Windows 3.1 Multimedia, Que Corporation 1992.

Practical part

C programs to generate

1. Point
2. Line
3. Rectangle
4. Circle
5. Pie chart
6. Clipping
7. Generation of text
8. Animation of a point
9. Animation of a line
10. Animation of a pie chart
11. Combination of line, circle etc
12. Animation of figure

Open Elective(OE) Paper for UG Programmes

Title of the paper : Artificial Intelligence

Conditions : This paper is offered as an Open Elective to the CBSC UG Students other than computer science . students can opt for this paper once in any of the six semester during the three year course.

CO1	Demonstrate fundamental understanding of artificial intelligence (AI) and expert systems.
CO2	Apply basic principles of AI in solutions that require problem solving, inference, perception, knowledge representation, and learning.

PAPER STRUCTURE

Papers	Type	Teaching Hours per week(16 weeks)			Examination Scheme			
		Theory	Practical/ Skill Development	No. of Credits	Exam Duration	Theory Max. Marks	IA Max. Marks	Total Marks
ARTIFICIAL INTELLIGENCE	OE	04	-	03	2hrs	50	50	100

UNIT I	What is AI, History of AI, Intelligent Agents – Agents and environments – Good behavior – The nature of environments – Structure of agents – Problem Solving – Problem solving agents – Example problems – Searching for solutions – Uniformed search strategies – Avoiding repeated states – Searching with partial information.	10hrs
UNIT II	Logical Agents-The wumpus world, logic-propositional logic-syntax and semantics Propositional theorem proving First Order Logic – syntax and semantics – Using first order logic – Knowledge engineering	10hrs
UNIT III	Expert system-characteristics, capabilities, components of expert system, knowledge base, interface engine, user interface, expert system limitations, applications of expert system, expert system technology, development of expert system-general steps, benefits of expert system. Robotics-what are robots, robotics, robot locomotion, components of a robot, computer vision, tasks of computer vision, application domains of computer vision, applications of robotics.	12hrs

TEXT BOOK

1. Stuart Russell, Peter Norvig, “Artificial Intelligence – A Modern Approach”, Second Edition, Pearson Education, 2004.

REFERENCES

1. Nils J. Nilsson, “Artificial Intelligence: A new Synthesis”, Harcourt Asia Pvt. Ltd., 2000.

2. Elaine Rich and Kevin Knight, “Artificial Intelligence”, Third Edition , Tata McGraw Hill, 2009.

Open Elective(OE) Paper for UG Programmes

Title of the paper : ANDROID APPLICATION PROGRAMMING (OpenElective)

Conditions : This paper is offered as an Open Elective to the CBSC UG Students other than computer science . students can opt for this paper once in any of the six semester during the three year course.

CO No.	Course Objectives
	On completion of the course the student will be able
CO 1	Understand the history of Android development and what is required to build Android apps
CO 2	demonstrate their understanding of the fundamentals of Android operating systems
CO 3	demonstrate their skills of using Android software development tools
CO 4	demonstrate their ability to deploy software to mobile devices

PAPER STRUCTURE

Papers	Type	Teaching Hours per week(16 weeks)				Examination Scheme			
		Theory	Practical/ Skill Development	No. of Credits		Exam Duration	Theory Max. Marks	IA Max. Marks	Total Marks
ANDROID APPLICATION PROGRAMMING	OE	03	0	03	2hrs	50	50	100	

UNIT I Getting Started With Android Programming – What is Android?, (10 hrs)
 Android SDK installation and configuration, Anatomy of an Android application, Activities, Fragments and Intents- Understanding Activities, Linking Activities using intents, Fragments, Calling Built in applications using intents, Displaying Notifications.

UNIT II The Android User Interface- Understanding the components of a (11 hrs)
 screen, Adapting to display orientation, Managing changes to screen orientation, Creating the user interface programmatically, Listening for UI notifications, Designing User Interface with Views- Using basic views, Using Picker Views

UNIT III Data Persistence – Saving and Loading User Preferences, Persisting (11 hrs)
 Data to Files, Creating and using Databases. Content Providers - Sharing Data in Android, Using a Content Provider, Creating Your Own Content Providers.
 Messaging – SMS Messaging ,Location-Based Services

TEXT BOOK

Wei-Meng Lee, "Beginning Android 4 Application Development", Wrox publications, 2012

REFERENCES

1. The Android Developer's Cookbook: Building Applications with the Android SDK James Steele, Nelson to Addison Wesley Publications 2010 First Edition.
2. Professional Android Application Development. Reto Meier, Wrox publications, 2009, Second Edition.

YOGA AND HEALTH **CBCS- Syllabus Of the Course**

Duration:30hrs

PREAMBLE

YOGA for Healthy Living

A holistic approach to health in all its aspects – physical, mental, emotional and spiritual. Yogasanas are time tested exercises for the harmonious development of a sound body and mind. This is a science of body culture which has come down to us from the ancient sages as a part of our great cultural heritage.

The therapeutic value of the yogasanas is well known in the world over. But this can be harnessed only when it is practiced under right guidance along with moral disciplines which sage Patanjali describes as yama and niyama. It ensures revitalization of the body metabolism by total relaxation of the system. It frees one from the undue stress and strain which have become part and parcel of modern life.

This valuable science needs to be preserved, popularized and taught to suit the needs of the common man in the modern times.

“

YOGA for Healthy Living” is designed for the use of anyone who would like to keep himself physically fit and relaxed in the midst of his crushing daily routine.

Yoga is a discipline to improve or develop one’s inherent power in a balanced manner. It offers the means to attain complete self-realization. The literal meaning of the Sanskrit word yoga is “Yoke” yoga can therefore be defined as a means of uniting the individual spirit with the universal spirit of god.

It is my personal experience that the practice of YOGA transforms and even sublimates the mind , giving the power of self control, confidence and the stamina to withstand and overcome the stresses and strains that are integral part of life.

The techniques of performing Surya Namaskar, Asanas, Pranayama, Bandhas, Mudras and Kriyas are dealt in detail with illustrations wherever necessary in simple and non technical manner.

OBJECTIVES

Yoga is holistic approach to health in all its aspects – physical, mental, emotional and spiritual. Yogasanas are time tested exercises for the harmonious development of a sound body and mind. Yoga education helps in self discipline and self control, leading to immense

amount of awareness , concentration and higher level of consciousness. Briefly the aim and objectives of yoga education is to enable the student to have good health.

Practice of YOGA transforms and even sublimates the mind , giving the power of self control, confidence and the stamina to withstand and overcome the stresses and strains that are integral part of life.

Unit-1

- Concepts of Yoga
- Definition of Yoga
- What Yogasana is
- Benefits of Yogasana – Physical , Mental, Spiritual.
- The four Yogas
- Karma Yoga
- Bhakti Yoga
- Jnana yoga
- Raja Yoga

Unit-2

- Astanga Yoga – Eight Limbs of Yoga
- Yama – Universal moral commandments
- Niyama – Self Purification by discipline
- Asana – Posture
- Pranayama – Rhythmic control of the breath
- Pratyahara – Withdrawal of the senses
- Dharana – Concentration
- Dhyana – Meditation
- Samadhi – State of super consciousness

Unit-3

- What Yoga seeks to do
- What Yogasana is
- Why Yogasana
- Objectives
- Benefits of yogasanas
- Hints and cautions for practicing yogasanas

Unit-4

1. Concept of Pranayama:

- Ujjayi Pranayama
- Nadishodhana Pranayama
- Brahmari Pranayama
- Bhastrika Pranayama
- Shitali Pranayama
- Shitkari Pranayama
- Techniques for Practicing

2. Bandhas

Mudras

Kriyas

Unit-5

- Practical Yoga program
- Asanas
- Standing postures
- Backward bending postures
- Forward bending postures
- Spine/inverted postures
- Sitting postures

Unit-6

- Pranayama (Practical session)

Dhyana (Meditation)

- Object Meditation
- Meditating on one's favorite deity
- Meditating by observing one's own breath

Unit-7

Personality development through Yoga

- Objectives
- Concepts of personality
- Factors that affects personality

Unit-8

Stress management through Yoga
Mental Health

- Concept
- Criteria of a mentally healthy person
- Kuvempu's Pancha Mantra – Five Doctrines

Holistic Development of Personality
Yogic management and diet cure of common ailments by applied techniques

- Acupressure
- Clap therapy
- Aqua therapy
- Oil pulling

Bibliography:

B K S Iyengar – Light on Yoga

B K S Iyengar – Light on Pranaya