DIPLOMA WING

RAJIV GANDHI PROUDYOGIKI VISHWAVIDYALAYA,BHOPAL

SCHEME OF STUDIES & EXAMINATIONS (IMPLEMENTED FROM SESSION : JULY 2023)

SCHEME	NAME OF BRANCH	BRANCH CODE	SEMESTER
OCBC JULY2022/ 2023	COMPUTER SCIENCE AND ENGINEERING	C04	SIXTH (VI)

S.N.	PAPER CODE	SUBJECT CODE	SUBJECT NAME	THEORY COMPONENT								PRACTICAL COMPONENT					TOTAL CREDITS	TOTAL MARKS
				HRS PER WEEK	CREDITS	TERM WORK				THEORY PAPER		HRS PER WEEK	CREDITS	LAB WORK	PRACTICAL EXAM/VIVA			
						QUIZ/ASSIGNMENT	MID TERM TEST*		TOTAL	MARKS	DURATION				MARKS	DURATION		
							I	II										
1	7386	601	ENTREPRENEURSHIP AND START -UPS	4	4	10	10	10	30	70	03 Hrs.	0	0	0	0	0	4	100
2	7497	611	MOBILE COMPUTING OR	3	3	10	10	10	30	70	03 Hrs.	4	2	20	30	3 Hrs.	5	150
	7498	612	NETWORK FORENSICS															
3	7499	621	SOFTWARE TESTING OR	3	3	10	10	10	30	70	03 Hrs.	4	2	20	30	3 Hrs.	5	150
	7500	622	FREE AND OPEN SOURCE SOFTWARE (FOSS)															
4	7603	631	DISASTER MANAGEMENT OR	3	3	10	10	10	30	70	03 Hrs.	0	0	0	0	0	3	100
	7604	632	PROJECT MANAGEMENT															
5	7605	641	ARTIFICIAL INTELLIGENCE OR	3	3	10	10	10	30	70	03 Hrs.	0	0	0	0	0	3	100
	7606	642	ENGINEERING ECONOMICS AND ACCOUNTANCY															
6			INDIAN CONSTITUTION	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7			MAJOR PROJECT **	0	0	0	0	0	0	0	0	6	4	100	50	03 Hrs.	4	150
8			SEMINAR ***	3	1	50	0	0	50	0	0	0	0	0	0	0	1	50
9			LIBERARY/VISITS etc.	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
TOTAL				21	17				200	350		15	8	140	110		25	800

NOTE - (1)* Two Best, out of Three Mid Term Tests (Progressive Tests) Marks should be entered here.

(2)** One Credit is carried forward from the Vth semester major project evaluation.

(3)*** One Hour Time duration for each student.

GRAND TOTAL OF CREDITS	GRAND TOTAL OF MARKS
25	800

DIPLOMA WING
RAJIV GANDHI PROUDYOGIKI VISHWAVIDYALAYA, BHOPAL
DIPLOMA IN COMPUTER SCIENCE AND ENGINEERING (C04)

SEMESTER VI

COURSE TITLE	:	ENTREPRENEURSHIP AND START-UPS
PAPER CODE	:	7386
SUBJECT CODE	:	601
TREORY CREDITS	:	04
PRACTICAL CREDITS	:	00

Course Learning Objectives:

1. Acquiring Entrepreneurial spirit and resourcefulness.
2. Familiarization with various uses of human resource for earning dignified means of living.
3. Understanding the concept and process of entrepreneurship - its contribution and role in the growth and development of individual and the nation.
4. Acquiring entrepreneurial quality, competency, and motivation.
5. Learning the process and skills of creation and management of entrepreneurial venture.

Course Content:

Unit 1 - Introduction to Entrepreneurship and Start – Ups

- Definitions, Traits of an entrepreneur, Intrapreneurship, Motivation
- Types of Business Structures, Similarities/differences between entrepreneurs and managers.

Unit 2 – Business Ideas and their implementation

- Discovering ideas and visualizing the business
- Activity map
- Business Plan

Unit 3 – Idea to Start-up

- Market Analysis – Identifying the target market,
- Competition evaluation and Strategy Development,
- Marketing and accounting,
- Risk analysis

Unit 4 – Management

- Company's Organization Structure,
- Recruitment and management of talent.
- Financial organization and management

Unit 5 - Financing and Protection of Ideas

- Financing methods available for start-ups in India
- Communication of Ideas to potential investors – Investor Pitch
- Patenting and Licenses
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Unit 6: Exit strategies for entrepreneurs, bankruptcy, and succession and harvesting strategy

Learning Outcome:

Upon completion of the course, the student will be able to demonstrate knowledge of the following topics:

1. Understanding the dynamic role of entrepreneurship and small businesses
2. Organizing and Managing a Small Business
3. Financial Planning and Control
4. Forms of Ownership for Small Business
5. Strategic Marketing Planning
6. New Product or Service Development
7. Business Plan Creation

SUGGESTED LEARNING RESOURCES:

S. No.	Title of Book	Author	Publication
1.	The Startup Owner's Manual: The Step-by-Step Guide for Building a Great Company	Steve Blank and Bob Dorf	K & S Ranch ISBN – 978-0984999392
2.	The Lean Startup: How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses	Eric Ries	Penguin UK ISBN – 978-0670921607
3.	Demand: Creating What People Love Before They Know They Want It	Adrian J. Slywotzky with Karl Weber	Headline Book Publishing ISBN – 978-0755388974
4.	The Innovator's Dilemma: The Revolutionary Book That Will Change the Way You Do Business	Clayton M. Christensen	Harvard business ISBN: 978-142219602

SUGGESTED SOFTWARE/LEARNING WEBSITES:

a. https://www.fundable.com/learn/resources/guides/startup

b. https://corporatefinanceinstitute.com/resources/knowledge/finance/corporate-structure/

c. https://www.finder.com/small-business-finance-tips

d. https://www.profitbooks.net/funding-options-to-raise-startup-capital-for-your-business/

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DIPLOMA WING
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DIPLOMA IN COMPUTER SCIENCE AND ENGINEERING (C04)

SEMESTER VI

COURSE TITLE	:	MOBILE COMPUTING
PAPER CODE	:	7497
SUBJECT CODE	:	611
TREORY CREDITS	:	03
PRACTICAL CREDITS	:	02

Course Learning Objectives:

To teaches how to build mobile apps for Android. Students are expected to work on a project as part of the course.

Course Content:

UNIT 1:

A brief history of Mobile, Types of mobile phone generations, The Mobile Ecosystem, Types of Mobile Applications, Mobile Information Architecture Android Versions, Features of Android, Android Architecture, Installing Android SDK Tools, Configuring Android in Eclipse IDE, Android Development Tools (ADT), Creating Android Virtual Devices (AVD)

UNIT 2:

Creating first android application, Anatomy of android application, Deploying Android app on USB connected Android device, Android application components, Activity life cycle, Understanding activities, Exploring Intent objects, Intent Types, Linking activities using intents

UNIT 3:

Fragments life cycle, Interaction between fragments, Understanding the components of a screen (Layouts), Adapting to display orientation, Action Bar, Views(UI Widgets)-Button, Toast, ToggleButton, CheckBox, RadioButton, Spinner, WebView, EditText, DatePicker, TimePicker, ListView, ProgressBar, Analog and Digital clock, Handling UI events, List fragment, Dialog fragment

UNIT 4:

Menus-Option, Context, Popup, Images-ImageView, ImageSwitcher, AlertDialog, Alarm manager, SMS, E-mail, Media Player, Using camera, recording video, Handling Telephony Manager

UNIT 5:

Storing the data persistently-Data Storage Options: preferences, Internal Storage, External Storage, Content Provider , The SQLite database, Connecting with SQLite database and operations-Insert, Delete, Update, Fetch, Publishing android applications, Deploying APK files

Suggested Lab Work:

This is a skill course. Topics/tools taught in the class should be practiced in the Lab same week and practiced regularly during the semester till student becomes confident about it. Students should explore features of various tools/technologies introduced during the course and become comfortable with their use. Teacher should give weekly practice tasks as assignment. Learnings from this course should be used in the project/software built.

Reference Books:

1. Wei-Meng Lee, Beginning Android 4 Application Development, Wiley Publishing, Inc.
2. Pradeep Kothari, "Android Application Development Black Book", DreamTech Press
3. James C.Sheusi, "Android Application Development for Java Programmers", Cengage Learning
4. Mark L Murphy, "Beginning Android", Wiley India Pvt Ltd
5. Sayed Y Hashimi and Satya Komatineni(2009), "Pro Android", Wiley India Pvt Ltd
6. Reto Meier, Professional Android 4 Application Development, Wiley India Pvt Ltd

Course outcomes:

Will be able to develop and deploy basic mobile applications.

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DIPLOMA WING
RAJIV GANDHI PROUDYOGIKI VISHWAVIDYALAYA, BHOPAL
DIPLOMA IN COMPUTER SCIENCE AND ENGINEERING (C04)
SEMESTER VI

COURSE TITLE	:	NETWORK FORENSICS
PAPER CODE	:	7498
SUBJECT CODE	:	612
TREORY CREDITS	:	03
PRACTICAL CREDITS	:	02

Course Learning Objectives:

To understand various network forensic aspects for analysing network security breach

Course Content:

UNIT 1:

Review of Networking concepts and Protocols, Introduction to Network Forensics, various aspects of Network Forensics

UNIT 2:

Introduction to Network Forensic Tools and techniques: Wireshark, TCP Dump, Syslog, NMS, Promiscuous Mode, Network Port Mirroring, snooping, scanning tools, etc.

UNIT 3:

Understanding and Examining Data Link Layer, Physical Layer, Ethernet Switch Logs, MAC Table, ARP Table, etc.

Understanding and Examining Network Layer, Router Logs, WiFi Device logs, Firewall logs,

UNIT 4:

Understanding audit features of OS and applications; Enabling and Examining Server logs, User activity logs, Browser history analysis, Proxy server logs, Antivirus logs, Email logs

UNIT 5:

Limitations and challenges of network forensics due to encryption, spoofing, mobility, storage limitations, privacy laws, etc.

Suggested Lab Work:

This is a skill course. Topics/tools taught in the class should be practiced in the Lab same week and practiced regularly during the semester till student becomes confident about it. Students should explore features of various tools/applications introduced during the course. Teacher should give weekly tasks as assignment.

Reference Books:

1. Manuals of OS, application software, network devices
2. RFCs of various networking protocols (https://www.ietf.org/)
3. https://www.sans.org/
4. https://www.cert-in.org.in/
5. Handbook of Digital Forensics and Investigation, Eoghan Casey, Elsevier Academic Press
6. Cyber Forensics, Albert Marcella and Doug Menendez, CRC Press
7. Computer Forensics (5 volume Set) mapping to CHFI (Certified Hacking Forensics Investigator), by EC-Council

Course outcomes:

Student will understand basic concepts of network forensics, learn tools, and will be able to do basic forensic investigations and handle security incidents.

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DIPLOMA WING
RAJIV GANDHI PROUDYOGIKI VISHWAVIDYALAYA, BHOPAL
DIPLOMA IN COMPUTER SCIENCE AND ENGINEERING (C04)

SEMESTER VI

COURSE TITLE	:	SOFTWARE TESTING
PAPER CODE	:	7499
SUBJECT CODE	:	621
TREORY CREDITS	:	03
PRACTICAL CREDITS	:	02

Course Learning Objectives:

Inculcate essential software testing knowledge and skills, required to reasonably test a system under development in a systematic manner.

Course Content:

As per the course design, concepts learned in this course will/should be used in the major project (Proj.202).

UNIT 1: Basics

Introduction to Software Quality basics: Verification and validation, quality perspectives, Testing terminology, Software Testing Life Cycle (STLC), "V" model of Testing, QA process, cost of testing, types of tests,

UNIT 2: Writing Test Cases

Writing test cases, Functional Testing, non-functional testing, (Performance testing), UI testing. Preparing test data, Writing Unit test, Integration test and User Acceptance Tests, preparing test scenarios from Software requirements

UNIT 3: Test Execution and Management

test execution, Test Oracles, test planning, test strategy including when to stop testing, test-coverage - Traceability matrix, JIRA, Bugzilla and other bug tracking tools. Test data mining, test reporting.

UNIT 4: Test Automation

Why automation, when not to automate, writing simple automated test cases, learn and practice any one automated testing framework like Selenium and …

UNIT 5: Other quality Assurance

Quality and Defect management - Code reviews, Quality tools, Change management, version control

Suggested Lab Work:

Writing and executing test cases of different types for a sample system, may be for the minor project done earlier; using Bugzilla to report cases; writing performance test cases for different types of test (load, stress, benchmarking, etc.); Writing automated test for UI, writing-executing test scripts for a sample system

Reference Books/Resources:

1. Software Engineering – A Practitioner's Approach, 7th Edition, Roger Pressman.
2. Bugzilla (https://www.bugzilla.org/)
3. JIRA (https://www.atlassian.com/software/jira)

Course outcomes:

Student will develop skills to understand the system, choose suitable testing methods, strategies, tools and technology, execute and report the test. Student will also be able to understand need and usage of test automation and gain expertise in at least 1 test automation tool.

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DIPLOMA IN COMPUTER SCIENCE AND ENGINEERING (C04)

SEMESTER VI

COURSE TITLE	:	FREE AND OPEN SOURCE SOFTWARE(FOSS)
PAPER CODE	:	7500
SUBJECT CODE	:	622
TREORY CREDITS	:	03
PRACTICAL CREDITS	:	02

Course Learning Objectives:

Exposure to free and open source software philosophy and tools.

Course Content:

UNIT 1: FOSS PHILOSOPHY

Understanding the FOSS Community and FOSS Philosophy, Benefits of Community based Software Development, Guidelines for working with FOSS community, Requirements for being open, free software, open source software, FOSS Licensing Models, FOSS examples

UNIT 2: LINUX

Linux Installation and Hardware Configuration, Boot Process, Dual-Booting Linux and other Operating Systems, Kernel Options during Boot, X Windows System Configuration, System Administration (Server Administration, Backup and Restore Procedures, Strategies for keeping a Secure Server)

UNIT 3: Programming Tools and Techniques

Libreoffice Tools; Samba: Cross platform; Introduction about LAMP; Brief Introduction to Programming using languages like Java /Python / Perl; Database Systems Mysql, PostgreSQL or equivalent; Open Source UML Tools; Introduction to Mobile Programming; Version Control Systems like SVN, Git or equivalent; Project Management Tools; Bug Tracking Systems; Package Management Systems

UNIT 4: FOSS CASE STUDIES

Some example case studies of FOSS implementation

Suggested Lab Work:

This is a skill course. Topics/tools taught in the class should be practiced in the Lab same week and practiced regularly during the semester till student becomes confident about it. Students should explore features of various FOSS tools/applications on a Linux system. Teacher should give weekly tasks as assignment. Learnings from this course should be used in the major project.

Reference Books:

8. **Linux in a Nutshell, by Ellen Siever**
9. Philosophy of GNU URL: http://www.gnu.org/philosophy/.
10. Linux Administration URL: http://www.tldp.org/LDP/lame/LAME/linux-admin-made-easy/.
11. Version control system URL: http://git-scm.com/.
12. Samba: URL : http://www.samba.org/.
13. Libre office: http://www.libreoffice.org/.

Course outcomes:

Student will be able to work with FOSS tools, find and evaluate FOSS alternatives for any software requirement.

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DIPLOMA IN COMPUTER SCIENCE AND ENGINEERING (C04)

SEMESTER VI

COURSE TITLE	:	DISASTER MANAGEMENT
PAPER CODE	:	7603
SUBJECT CODE	:	631
TREORY CREDITS	:	03
PRACTICAL CREDITS	:	00

Course Learning Objectives:

Following are the objectives of this course:

- To learn about various types of natural and man-made disasters.
- To know pre- and post-disaster management for some of the disasters.
- To know about various information and organisations in disaster management in India.
- To get exposed to technological tools and their role in disaster management.

Course Content:

Unit – I: Understanding Disaster

Understanding the Concepts and definitions of Disaster, Hazard, Vulnerability, Risk, Capacity – Disaster and Development, and disaster management.

Unit – II: Types, Trends, Causes, Consequences and Control of Disasters

Geological Disasters (earthquakes, landslides, tsunami, mining); Hydro-Meteorological Disasters (floods, cyclones, lightning, thunder-storms, hail storms, avalanches, droughts, cold and heat waves) Biological Disasters (epidemics, pest attacks, forest fire);

Technological Disasters (chemical, industrial, radiological, nuclear) and Manmade Disasters (building collapse, rural and urban fire, road and rail accidents, nuclear, radiological, chemicals and biological disasters) Global Disaster Trends – Emerging Risks of Disasters – Climate Change and Urban Disasters.

Unit- III: Disaster Management Cycle and Framework

Disaster Management Cycle – Paradigm Shift in Disaster Management.

Pre-Disaster – Risk Assessment and Analysis, Risk Mapping, zonation and Microzonation, Prevention and Mitigation of Disasters, Early Warning System; Preparedness, Capacity Development; Awareness.

During Disaster – Evacuation – Disaster Communication – Search and Rescue – Emergency Operation Centre – Incident Command System – Relief and Rehabilitation –

Post-disaster – Damage and Needs Assessment, Restoration of Critical Infrastructure – Early Recovery – Reconstruction and Redevelopment; IDNDR, Yokohama Stretegy, Hyogo Framework of Action.

Unit– IV: Disaster Management in India

Disaster Profile of India – Mega Disasters of India and Lessons Learnt.

Disaster Management Act 2005 – Institutional and Financial Mechanism,

National Policy on Disaster Management, National Guidelines and Plans on Disaster Management; Role of Government (local, state and national),Non-Government and Inter Governmental Agencies

Unit– V: Applications of Science and Technology for Disaster Management

Geo-informatics in Disaster Management (RS, GIS, GPS and RS).

Disaster Communication System (Early Warning and Its Dissemination).

Land Use Planning and Development Regulations, Disaster Safe Designs and Constructions, Structural and Non Structural Mitigation of Disasters

S&T Institutions for Disaster Management in India

References

1. Publications of National Disaster Management Authority (NDMA) on Various Templates and Guidelines for Disaster Management
2. Bhandani, R. K., An overview on natural & man-made disasters and their reduction, CSIR, New Delhi
3. Srivastava, H. N., and Gupta G. D., Management of Natural Disasters in developing countries, Daya Publishers, Delhi
4. Alexander, David, Natural Disasters, Kluwer Academic London
5. Ghosh, G. K., Disaster Management, A P H Publishing Corporation
6. Murthy, D. B. N., Disaster Management: Text & Case Studies, Deep & Deep Pvt. Ltd.

Course outcomes:

After competing this course, student will be:

- Acquainted with basic information on various types of disasters
- Knowing the precautions and awareness regarding various disasters
- Decide first action to be taken under various disasters
- Familiarised with organisation in India which are dealing with disasters
- Able to select IT tools to help in disaster management

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DIPLOMA WING
RAJIV GANDHI PROUDYOGIKI VISHWAVIDYALAYA, BHOPAL
DIPLOMA IN COMPUTER SCIENCE AND ENGINEERING (C04)

SEMESTER VI

COURSE TITLE	:	PROJECT MANAGEMENT
PAPER CODE	:	7604
SUBJECT CODE	:	632
TREORY CREDITS	:	03
PRACTICAL CREDITS	:	00

Course Learning Objectives:

- To develop the idea of project plan, from defining and confirming the project goals and objectives, identifying tasks and how goals will be achieved.
- To develop an understanding of key project management skills and strategies.

Course Content:

UNIT-I: Concept of a project: Classification of projects- importance of project management- The project life cycle- establishing project priorities (scope-cost-time)project priority matrix- work break down structure.

UNIT-II: Capital budgeting process: Planning- Analysis-Selection-Financing-Implementation-Review. Generation and screening of project ideas- market and demand analysis- Demand forecasting techniques. Market planning and marketing research process- Technical analysis

UNIT-III: Financial estimates and projections: Cost of projects-means of financing-estimates of sales and production-cost of production-working capital requirement and its financing-profitability projected cash flow statement and balance sheet. Break even analysis.

UNIT-IV: Basic techniques in capital budgeting: Non discounting and discounting methods- pay-back period- Accounting rate of return-net present value-Benefit cost ratio-internal rate of return. Project risk. Social cost benefit analysis and economic rate of return. Non-financial justification of projects**.**

UNIT-V: Project administration: progress payments, expenditure planning, project scheduling and network planning, use of Critical Path Method (CPM), schedule of payments and physical progress, time-cost trade off.

Concepts and uses of PERT cost as a function of time, Project Evaluation and Review Techniques/cost mechanisms. Determination of least cost duration. Post project evaluation. Introduction to various Project management softwares.

Reference Books:

1. Project planning, analysis, selection, implementation and review – Prasannachandra – Tata McGraw Hill
2. Project Management – the Managerial Process – Clifford F. Gray & Erik W. Larson - McGraw Hill
3. Project management - David I Cleland - Mcgraw Hill International Edition, 1999
4. Project Management – Gopala krishnan – Mcmillan India Ltd.
5. Project Management-Harry-Maylor-Peason Publication

Course outcomes:

At the end of the course, the student will be able to:

CO1	Understand the importance of projects and its phases.
CO2	Analyze projects from marketing, operational and financial perspectives.
CO3	Evaluate projects based on discount and non-discount methods.
CO4	Develop network diagrams for planning and execution of a given project.
CO5	Apply crashing procedures for time and cost optimization.

DIPLOMA WING
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DIPLOMA IN COMPUTER SCIENCE AND ENGINEERING (C04)

SEMESTER VI

COURSE TITLE	:	ARTIFICIAL INTELLIGENCE
PAPER CODE	:	7605
SUBJECT CODE	:	641
TREORY CREDITS	:	03
PRACTICAL CREDITS	:	00

Course Content:

Unit 1 – Introduction to Artificial Intelligence

- Artificial Intelligence (AI) definition
- Goals of AI
- History of AI
- Applications of AI

Unit 2 – Agents and Environments

- Agent Terminology, Types of Agents – Simple Reflex Agents, Model Based Reflex Agents, Goal Based Agents
- Nature of Environments, Properties of Environments

Unit 3 – Search Algorithms

Terminology

- Brute Force Search Strategies – Breadth First Search, Depth First Search.
- Heuristic Search Strategies, Local Search Algorithms.

Unit 4 – Fuzzy Logic Systems

Introduction to Fuzzy Logic and Fuzzy systems,

- Membership functions,
- Fuzzification/Defuzzification

Unit 5 – Neural Networks

Basic structure of Neural Networks

- Perceptron
- Back-propagation

Suggested Learning Resources:

S. No.	Title of Book	Author	Publication
1	Artificial Intelligence By Example: Develop machine intelligence from scratch using real artificial intelligence use cases	Denis Rothman	Packt Publishing ISBN – 978-1788990547

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DIPLOMA IN COMPUTER SCIENCE AND ENGINEERING (C04)
SEMESTER VI

COURSE TITLE	:	ENGINEERING ECONOMICS AND ACCOUNTANCY
PAPER CODE	:	7606
SUBJECT CODE	:	632
TREORY CREDITS	:	03
PRACTICAL CREDITS	:	00

Course Learning Objectives:

- To acquire knowledge of basic economics to facilitate the process of economic decision making.
- To acquire knowledge on basic financial management aspects.
- To develop the basic skills to analyze financial statements.

Course Content:

UNIT-I: Introduction: Managerial Economics; Relationship with other disciplines; Firms: Types, objectives and goals; Managerial decisions; Decision analysis.

Unit-II: Demand & Supply Analysis: Demand; Types of demand; Determinants of demand; Demand function; Demand elasticity; Demand forecasting; Supply; Determinants of supply; Supply function; Supply elasticity.

Unit-III: Production and Cost Analysis: Production function; Returns to scale; Production optimization; Least cost input; Isoquants; Managerial uses of production function; Cost Concepts; Cost function; Types of Cost; Determinants of cost; Short run and Long run cost curves; Cost Output Decision; Estimation of Cost.

Unit-IV: Pricing: Determinants of Price; Pricing under different objectives and different market structures; Price discrimination; Pricing methods in practice; Role of Government in pricing control.

Unit-V: Financial Accounting (Elementary Treatment): Balance sheet and related concepts; Profit & Loss Statement and related concepts; Financial Ratio Analysis; Cash flow analysis; Funds flow analysis; Comparative financial statements; Analysis & Interpretation of financial statements; Investments; Risks and return evaluation of investment decision; Average rate of return; Payback Period; Net Present Value; Internal rate of return,

Reference Books:

1. Premvir Kapoor, Sociology & Economics for Engineers, Khanna Publishing House, New Delhi, 2018
2. McGuigan, Moyer and Harris, 'Managerial Economics; Applications, Strategy and Tactics', Thomson South Western, 10th Edition, 2005.
3. Prasanna Chandra. 'Fundamentals of Financial Management', Tata Mcgraw Hill Publishing Ltd., 4th edition, 2005.
4. Samuelson. Paul A and Nordhaus W.D., 'Economics', Tata Mcgraw Hill Publishing Company Limited, New Delhi, 2004.
5. Paresh Shah, 'Basic Financial Accounting for Management', Oxford University Press, New Delhi, 2007. 3. Salvatore Dominick, 'Managerial Economics in a global economy'. Thomson South Western, 4th Edition, 2001.

Course outcomes:

At the end of the course, the student will be able to:

CO1	Understand the macro-economic environment of the business and its impact on enterprise
CO2	Understand cost elements of the product and its effect on decision making
CO3	Prepare accounting records and summarize and interpret the accounting data for managerial decisions
CO4	Understand accounting systems and analyze financial statements using ratio analysis
CO5	Understand the concepts of financial management and investment

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DIPLOMA WING

RAJIV GANDHI PROUDYOGIKI VISHWAVIDYALAYA, BHOPAL

DIPLOMA IN COMPUTER SCIENCE AND ENGINEERING (C04)

SEMESTER VI

COURSE TITLE	:	INDIAN CONSTITUTION
PAPER CODE	:	--
SUBJECT CODE	:	--
TREORY CREDITS	:	00
PRACTICAL CREDITS	:	00

Course Content

Unit 1 – The Constitution - Introduction

- The History of the Making of the Indian Constitution
- Preamble and the Basic Structure, and its interpretation
- Fundamental Rights and Duties and their interpretation
- State Policy Principles

Unit 2 – Union Government

- Structure of the Indian Union
- President – Role and Power
- Prime Minister and Council of Ministers
- Lok Sabha and Rajya Sabha

Unit 3 – State Government

- Governor – Role and Power
- Chief Minister and Council of Ministers
- State Secretariat

Unit 4 – Local Administration

- District Administration
- Municipal Corporation
- Zila Panchayat

Unit 5 – Election Commission

- Role and Functioning
- Chief Election Commissioner
- State Election Commission

Suggested Learning Resources:

S. No.	Title of Book	Author	Publication
1.	Ethics and Politics of the Indian Constitution	Rajeev Bhargava	Oxford University Press, New Delhi, 2008
2.	The Constitution of India	B.L. Fadia	Sahitya Bhawan; New edition (2017)
3.	Introduction to the Constitution of India	DD Basu	Lexis Nexis; Twenty-Third 2018 edition

Suggested Software/Learning Websites:

a. https://www.constitution.org/cons/india/const.html
b. http://www.legislative.gov.in/constitution-of-india
c. https://www.sci.gov.in/constitution
d. https://www.toppr.com/guides/civics/the-indian-constitution/the-constitution-of-india/

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DIPLOMA WING

RAJIV GANDHI PROUDYOGIKI VISHWAVIDYALAYA, BHOPAL

DIPLOMA IN COMPUTER SCIENCE AND ENGINEERING (C04)

SEMESTER - VI

COURSE TITLE	:	MAJOR PROJECT
PAPER CODE	:	--
COURSE CODE	:	--
TREORY CREDITS	:	00
PRACTICAL CREDITS	:	04 (03+01 Credit of the V Sem.)

MAJOR PROJECT

It should be based on real/live problems of the Industry/Govt./NGO/MSME/Rural Sector or an innovative idea having the potential of a Startup.

Evaluation is based on work done, quality of report, performance in vivavoce,

presentation etc

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DIPLOMA WING

RAJIV GANDHI PROUDYOGIKI VISHWAVIDYALAYA, BHOPAL

DIPLOMA IN COMPUTER SCIENCE AND ENGINEERING (C04)

SEMESTER - VI

COURSE TITLE	:	SEMINAR
PAPER CODE	:	--
COURSE CODE	:	--
TREORY CREDITS	:	01
PRACTICAL CREDITS	:	00

SEMINAR

Evaluation is based on work done, quality of report, performance in Viva-voce, presentation etc .

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