



DIPLOMA WING

**RAJIV GANDHI PROUDYOGIKI VISHWAVIDYALAYA, BHOPAL**

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

SCHEME
OCBC JULY 2022/2023

NAME OF BRANCH
ELECTRICAL ENGINEERING

BRANCH CODE
E01

SEMESTER
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 & START-UPS	4	4	10	10	10	30	70	03 Hrs.	0	0	0	0	0	4	100
2	7449	602	BUILDING ELECTRIFICATION	7	7	10	10	10	30	70	03 Hrs.	6	3	20	30	3 Hrs.	10	150
3	7603	611	DISASTER MANAGEMENT OR	3	3	10	10	10	30	70	03 Hrs.	0	0	0	0	0	3	100
	7604	612	PROJECT MANAGEMENT															
4	7605	621	ARTIFICIAL INTELLIGENCE OR	3	3	10	10	10	30	70	03 Hrs.	0	0	0	0	0	3	100
	7606	622	ENGG. ECO. & ACCOUNTANCY															
5			INDIAN CONSTITUTION	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6			MAJOR PROJECT **	0	0	0	0	0	0	0	0	6	4	100	50	03 Hrs.	4	150
7			SEMINAR ***	3	1	50	0	0	50	0	0	0	0	0	0	0	1	50
8			LIBRARY/VISITS etc.	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0
TOTAL				22	18				170	280		14	7	120	80		25	650

- 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
25

GRAND TOTAL OF MARKS
650



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**RAJIV GANDHI PROUDYOGIKI VISHWAVIDYALAYA, BHOPAL**  
**DIPLOMA IN ELECTRICAL ENGINEERING (E01)**

*SEMESTER VI*

COURSE TITLE	:	ENTREPRENEURSHIP AND START-UPS
PAPER CODE	:	7386
SUBJECT CODE	:	601
THEORY 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

**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 IN ELECTRICAL ENGINEERING (E01)**

*SEMESTER VI*

COURSE TITLE	:	BUILDING ELECTRIFICATION
PAPER CODE	:	7449
SUBJECT CODE	:	602
THEORY CREDITS	:	07
PRACTICAL CREDITS	:	03

**Course objectives:**

The aim of this course is to help the student to attain the following industry identified competency through various teaching learning experiences:

- Design electrical installation systems in building complexes.

**Course contents:**

**Unit – I Wiring Tools and Accessories**

Various tools required for wiring- screwdrivers, pliers, Try square, saws, hacksaw, chisel, hammers, mallet, rawl punch, hand drill machine, portable drilling machine, files, plumb bob, line thread, electricians knife, test lamp, tester and their BIS specifications, application, care & maintenance of tools.

Classification of electrical accessories- controlling, holding, safety, outlet

BIS symbols of following electrical accessories.

**Switch** – Their types according to construction such as surface switch, flush switch, and pull switch, rotary switch, knife switch, pendent switch, Main-switch (ICDP, ICTP). Their types according to working such as single pole, double pole, two-way, two-way centre off, intermediate, series parallel switch

**Holders-** Their types such as bayonet cap lamp holder, pendent holder, batten lamp holder, angle holder, bracket holder, tube light holder, screw type Edison and goliath Edison lamp holder, swivel lamp holder.

**Socket outlets and plugs-** two pin, three-pin, multi pin sockets, two-pin and three-pin plug.

**Others-** Iron connector, adaptor, and ceiling rose, distribution box, neutral link, bus-bar chamber.

Wooden/ mica boards, Moulded/ MS Concealed boxes of different sizes. Modular accessories.

**Unit – II Electrical Wires and Underground Cables**

Conductors: - wire, cable, bus bar, stranded conductor, cable, armoured cable, flexible cable, solid conductor, PVC wires, CTS wire, LC wire, FR (Fire retardant) wire, Size of wire according to BIS. Tools used for measurement of wire size, Wire jointing methods.

Classification of cables, low tension, high tension, and extra high tension cables, solid, oil filled and gas filled type

Cable insulation materials –vulcanized rubber (VIR), polyvinyl chloride (PVC), cross linked polythene (XLPE), impregnated paper, Selection of suitable cable size and type from standard data

Cable jointing methods  
Cable laying methods.  
Factors determining selection of electric cables

### **Unit- III Wiring Methods and wiring layout**

Factors determining the selection of wiring methods.  
Classification of wiring methods.  
PVC casing-capping wiring- wiring rules according to IS: 732-1983  
Conduit wiring- Types of conduit, comparison between Metal and PVC conduit, types of conduit wiring (Surface/Concealed). Conduit wiring accessories, BIS rules for Metal and PVC conduit wiring.  
Comparison of various wiring systems.  
General BIS rules for domestic installations.  
Design, working and drawing of following electrical circuits: Simple light and fan circuits, Stair case wiring, Go-down wiring circuit, Bedroom lighting circuit, Corridor lighting circuit, Series parallel circuit, Master switch control circuit, Different lighting circuit using - Intermediate switch, Call bell circuit using bell indicator, Design of wiring circuits according to user's requirement

### **Unit- IV Residential Building Electrification**

Domestic Dwellings/Residential Buildings: reading of Civil Engineering building drawing, Interpretation of electrical installation plan and electrical diagrams, electrical symbols as per IS: 732.  
Electrical installation for residential building as per part I section 9 of NEC-2011  
Difference between residential and industrial load, rules/requirements related to lighting load followed in electrical installations, Positioning of equipment.  
Lighting and power circuits: Light and fan circuit, Power circuit  
Wiring and circuit Schematic diagram according to IS: 2042(Part-I)-1962: multiline and single line representation  
Load assessment: Selection of size of conductors, Selection of rating of main switch and protective switch gear.  
Design and drawing, estimation and costing of a residential installation having maximum 5 KW load; Sequence to be followed for preparing estimate; Calculation of length of wire and other materials, labour cost  
Testing of wiring installation as per IS: 732-1982: Insulation resistance - between earth and conductors, between conductors, polarity test of single pole switches. Testing of earth continuity path.  
Residential building Service Connection- types Underground and overhead. Calculation of Material required for service connection

### **Unit- V Protection of Electrical Installation**

Fuse in electric circuit: fuse element, fuse current rating, minimum fusing current, cut-off current, fusing factor, Fuse material  
Types of fuses –Re-wirable, cartridge fuses (HRC and LRC), Fuse material Selection of fuse.  
Miniature circuit Breaker (MCB)-Construction, Principle rating and uses, Earth Leakage Circuit Breaker (ELCB)-Construction, Principle rating and uses.

System and equipment earthing and its requirements, Earth, earth electrode, earth current, earth terminal, earthing wire, earthing lead, fault current, leakage current, Measurement of earth resistance using earth tester, Methods of reducing earth resistance, Methods of earthing as per IS 3043: 1987 and their procedure- Driven pipe, pipe and plate earthing, modern methods of earthing,

### **Unit- V Illumination in Residential Installation**

Concept of Luminous flux, Luminous intensity, Lumen, Illumination or illuminance, Lux, Space-height ratio, utilization factor, depreciation factor, luminous efficiency- values for different luminaries.

Laws of Illumination-Inverse Square Law, Cosine Law, illumination received directly underneath, horizontal screen and screen moved horizontally at certain distance

Factors affecting the illumination. Different types of lighting arrangements,

Luminous flux of different types of light sources, Lux level required for different places as per SP 72: 2010.

#### **References:**

1. Raina, K.B. and S.K.Bhattacharya, Electrical Design Estimating and Costing, New Age International Ltd., New Delhi, ISBN 978-81-224-0363-3
2. Allagappan, N. S.Ekambarram, Electrical Estimating and Costing, New Delhi, ISBN-13: 9780074624784
3. Singh, Surjit, Electrical Estimating and Costing, Dhanpat Rai and Co. New Delhi, ISBN: 1234567150995
4. Gupta, J B: A Course in Electrical Installation Estimating and Costing, S K Kataria and Sons, New Delhi, ISBN:978-93-5014-279-0
5. Bureau of Indian Standard, IS: 732-1989, Code of practice for electrical wiring installation
6. Bureau of Indian Standard, SP 30 National Electrical Code 2010
7. Bureau of Indian Standard, SP 72 National Lighting Codes 2010
8. E-REFERENCES:-
  - <http://nptel.ac.in/courses/108108076/1> , assessed on 18<sup>th</sup> January 2016
  - <http://www.electrical4u.com>, assessed on 18<sup>th</sup> January 2016
  - <https://www.youtube.com/watch?v=A9KSGAnjo2U>, assessed on 18<sup>th</sup> January 2016
  - <http://www.electricaltechnology.org/2015/09>, assessed on 30 Jan 2016
  - [www.slideshare.net/bawaparam/made-by-param](http://www.slideshare.net/bawaparam/made-by-param) assessed on 30 Jan 2016
  - [www.electricaltechnology.org/2013/09/electrical-wiring.html](http://www.electricaltechnology.org/2013/09/electrical-wiring.html) assessed on 16 March 2016.

#### **Course outcomes:**

The theory, practical experiences and relevant soft skills associated with this course are to be taught and implemented, so that the student demonstrates the following industry oriented COs associated with the above mentioned competency:

- a) Select accessories, wires, cables and wiring systems for electrification.
- b) Design electrical wiring installation system for residential unit.
- c) Design proper illumination scheme for residential unit.
- d) Prepare wiring layouts on wiring board.
- e) Locate and diagnose faults in electrical wiring installation.
- f) Do proper earthing for building electrification.

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# **BUILDING ELECTRIFICATION LAB**

## **Course objectives:**

The aim of this course is to help the student to attain the following industry identified competency through various teaching learning experiences:

- Design electrical installation systems in building complexes.

## **Practicals:**

1. Prepare series testing board.
2. Select the electric wire using measuring and testing instruments for particular applications.
3. Identify cables of different current ratings.
4. Prepare wiring installation on a board showing control of one lamp, one fan and one socket from one switch board in PVC surface conduit wiring system.
5. Prepare wiring installation on a board.
6. Control one lamp from two different places using PVC surface conduit wiring system.
7. Prepare wiring installation on a board. Control one lamp from three different places using PVC surface conduit wiring system.
8. Prepare wiring installation on a board.
9. Perform go-down wiring for three blocks using PVC casing capping.
10. Design 2 BHK residential installation scheme and estimate the material required. And draw the details required for installation on A4 size sheet.
11. Test wiring installation using megger.

## **Course outcomes:**

The theory, practical experiences and relevant soft skills associated with this course are to be taught and implemented, so that the student demonstrates the following industry oriented COs associated with the above mentioned competency:

- a) Select accessories, wires, cables and wiring systems for electrification.
- b) Design electrical wiring installation system for residential unit.
- c) Design proper illumination scheme for residential unit.
- d) Prepare wiring layouts on wiring board.
- e) Locate and diagnose faults in electrical wiring installation.
- f) Do proper earthing for building electrification.

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**DIPLOMA IN ELECTRICAL ENGINEERING (E01)**

*SEMESTER VI*

COURSE TITLE	:	DISASTER MANAGEMENT
PAPER CODE	:	7603
SUBJECT CODE	:	611
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 Strategy, 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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*SEMESTER VI*

COURSE TITLE	:	PROJECT MANAGEMENT
PAPER CODE	:	7604
SUBJECT CODE	:	612
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:

C01	Understand the importance of projects and its phases.
C02	Analyze projects from marketing, operational and financial perspectives.
C03	Evaluate projects based on discount and non-discount methods.
C04	Develop network diagrams for planning and execution of a given project.
C05	Apply crashing procedures for time and cost optimization.

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*SEMESTER VI*

COURSE TITLE	:	ARTIFICIAL INTELLIGENCE
PAPER CODE	:	7605
SUBJECT CODE	:	621
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 ELECTRICAL ENGINEERING (E01)**

*SEMESTER VI*

COURSE TITLE	:	ENGINEERING ECONOMICS & ACCOUNTANCY
PAPER CODE	:	7606
SUBJECT CODE	:	622
THEORY 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:

C01	Understand the macro-economic environment of the business and its impact on enterprise
C02	Understand cost elements of the product and its effect on decision making
C03	Prepare accounting records and summarize and interpret the accounting data for managerial decisions
C04	Understand accounting systems and analyze financial statements using ratio analysis
C05	Understand the concepts of financial management and investment

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*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:**

<b>S. No.</b>	<b>Title of Book</b>	<b>Author</b>	<b>Publication</b>
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 IN ELECTRICAL ENGINEERING (E01)**

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 IN ELECTRICAL ENGINEERING (E01)**

*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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