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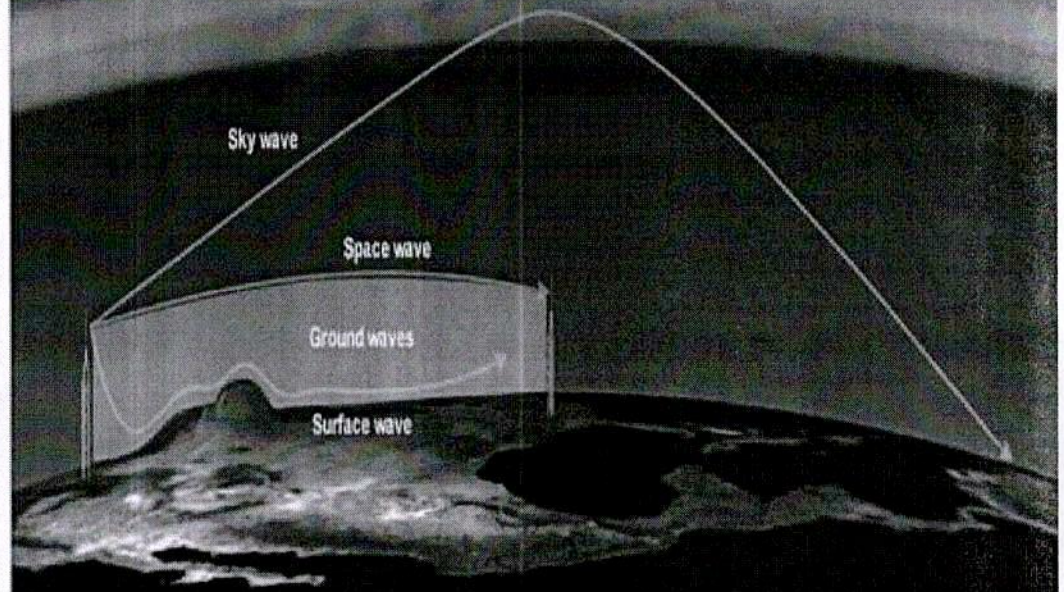

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We would also like to take the opportunity to express our specials thanks of gratitude to the publisher for providing a golden chance by giving us the most awaited platform to showcase our novel work.

Any attempt at any level can't be satisfactorily completed without our students' collaborative effort, resulting in our Book being unique.

Preface

Antenna is an essential terminal device in all types of communication and radar systems. Without an antenna, there would be no communication. So, the study of antennas and their field patterns is an important aspect of understanding many applications of wireless transmission technology. Keeping such things in mind, the material in the book is organised into five parts.

Chapter 1 provides the fundamental concept of Electromagnetic (EM) wave radiation and basic terminology involved in antennas to describe radiation and input characteristics. The concept of dipoles and yagi-array are also clearly explained. Chapter 2 emphasis various antennas and antenna array concepts. Particularly in chapter 2, deals with aperture antennas and slot antennas with its application. Various feeding structures are also explained in later part of the chapter. Chapter 3 incorporates the concept of Antenna arrays along with antenna synthesis techniques. Chapter 4 devoted a special class of antennas designed especially for specific requirement. This chapter deals such antennas namely frequency independent antennas and modern antennas. The second part of the chapter deals with procedure and methods for measuring antenna parameters. Chapter 5 focused on the modes of propagation and the structure of atmosphere. This chapter extends to the effect of the earth and the troposphere on the propagation of electromagnetic waves is considered in detail. This is followed by an exposition of the nature of the ionosphere and its effect on sky wave propagation.

SYLLABUS

UNIT I FUNDAMENTALS OF RADIATION

Definition of Antenna parameters – Gain, Directivity, Effective Aperture, Radiation Resistance, Band width, Beam width, Input Impedance. Matching – Baluns, Polarization Mismatch, Antenna Noise Temperature, Radiation from Oscillating Dipole, Half Wave Dipole. Folded Dipole, Yagi Array.

UNIT II APERTURE AND SLOT ANTENNAS

Radiation from Rectangular Apertures, Uniform and Tapered Aperture, Horn Antenna , Reflector Antenna, Aperture Blockage, Feeding Structures, Slot Antennas, Microstrip Antennas – Radiation Mechanism – Application, Numerical Tool for Antenna Analysis

UNIT III ANTENNA ARRAYS

N Element Linear Array, Pattern Multiplication, Broadside and End fire Array – Concept of Phased Arrays, Adaptive array, Basic principle of antenna Synthesis-Binomial array

UNIT IV SPECIAL ANTENNAS

Principle of Frequency Independent Antennas – Spiral Antenna, Helical antenna, Log Periodic. Modern Antennas - Reconfigurable Antenna, Active Antenna, Dielectric Antennas, Electronic Bandgap Structure and Applications, Antenna Measurements - Test Ranges, Measurement of Gain, Radiation Pattern, Polarization, VSWR.

UNIT V PROPAGATION OF RADIO WAVES ANTENNA AND WAVE PROPAGATION SYLLABUS

Modes of Propagation, Structure of Atmosphere, Ground wave Propagation, Tropospheric Propagation, Duct Propagation, Troposcatter Propagation, Flat earth and Curved earth concept Sky wave propagation – Virtual height, Critical Frequency, Maximum usable frequency – Skip Distance, Fading, Multi hop Propagation

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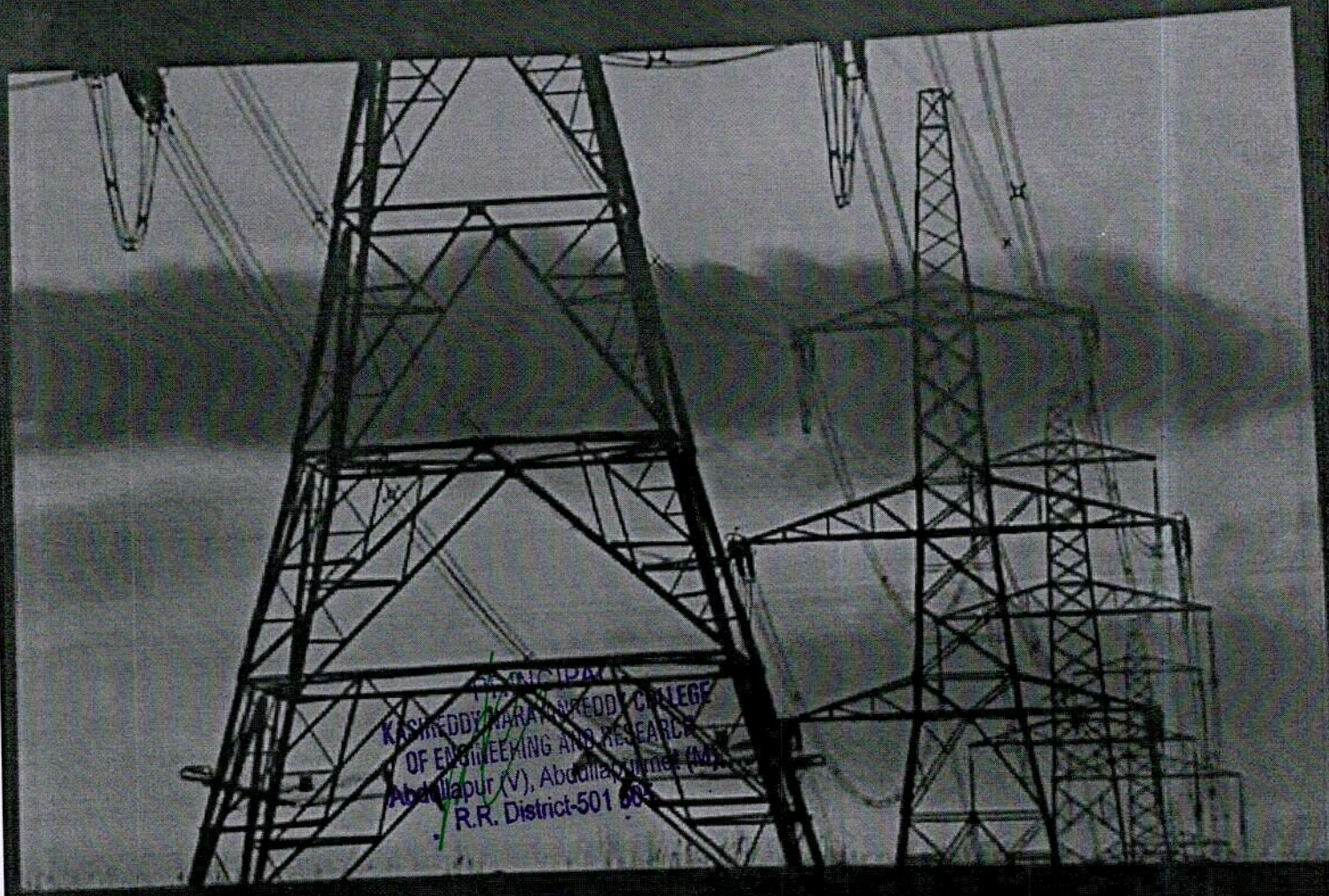
ELECTRICAL POWER DISTRIBUTION SYSTEM



M. Narendra Kumar

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Electrical Power Distribution System, First Edition

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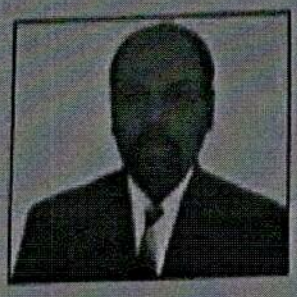
Contents

Electrical Power Distribution System

This book covers all the general and basic aspects of Electrical Power Distribution System courses offered by universities across India. The best part of the book is the language. The language is lucid and quite simple from a student's point of view. Readers will be able to understand the problems which may occur while designing and operation of distribution systems and can suggest solution for the problem.

This book covers the following topics,

- Electrical Power Distribution System and load characteristics.
- Design considerations of primary system.
- System analysis for voltage drop and power loss.
- Distribution system protection and coordination.
- Power factor improvement and economic justification.
- Harmonics and Filters.
- Voltage and reactive power control.
- Electrical Power Quality and its effect on equipment's.



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ELECTRICAL CIRCUIT THEORY AND TECHNOLOGY

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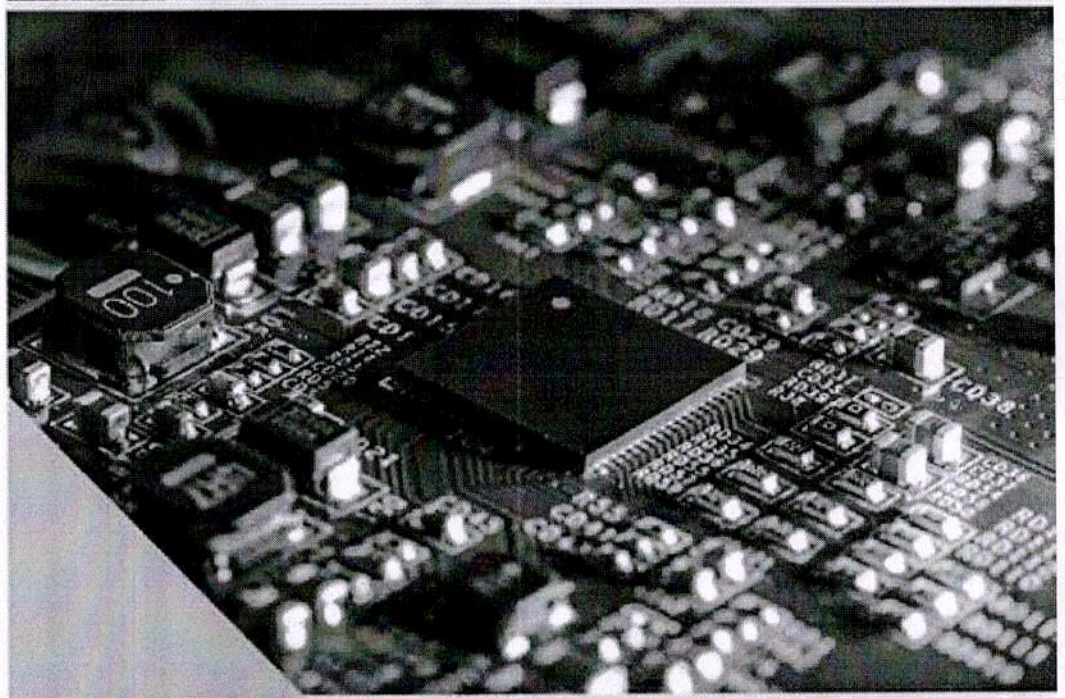

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SYLLABUS

UNIT –I (A) ELECTROSTATICS (B) D C CIRCUITS

(a) ELECTROSTATICS

Electric Flux-Electric Flux Density-electric Field Intensity-electric potential-Coulomb's laws of electrostaticsconcept of capacitance - Relationship between Voltage, Charge and capacitance – energy stored in a capacitor – capacitors in series and in parallel –Problems in above topics.

(b) D C CIRCUITS

Basic concepts of current, emf, potential difference, resistivity, temperature coefficient of resistance – Ohm's Law –application of Ohm's law – work, power energy – relationship between electrical, mechanical and thermal units – resistance – series circuits – parallel and Series parallel circuits – Kirchhoff's laws –Problems in the above topics.

UNIT-II CIRCUIT THEOREMS

Mesh equations – Nodal equations – star/delta transformations –Superposition theorem – Thevenin's theorem – Norton's theorem – Maximum power transfer theorem. (Problems in DC circuits only)

UNIT-III SINGLE PHASE CIRCUITS

'j' notations – rectangular and polar coordinates – Sinusoidal voltage and current – instantaneous, peak, average and effective values – form factor and peak factor(derivation for sine wave) – pure resistive, inductive and capacitive circuits – RL, RC, RLC series circuits – impedance –phase angle – phasor diagram – power and power factor – power triangle – apparent power, active and reactive power – parallel circuits (two branches only) - Conductance, susceptance and admittance –problems on all above topics.

UNIT-IV RESONANT CIRCUITS

Series resonance – parallel resonance (R,L &C; RL&C only) – quality factor – dynamic resistance – comparison of series and parallel resonance –Problems in the above topics - Applications of resonant circuits.

UNIT-V THREE PHASE CIRCUITS

Three phase systems-phase sequence –necessity of three phase system–concept of balanced and unbalanced load - balanced star &delta connected loads – relation between line and phase voltages and currents –phasor diagram –three phase power and power factor measurement by single wattmeter and two wattmeter methods –Problems in all above topics.

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TRANSPORTATION ENGINEERING– THEORY PRACTICE AND MODELING

TRANSPORTATION ENGINEERING

-THEORY PRACTICE AND MODELING

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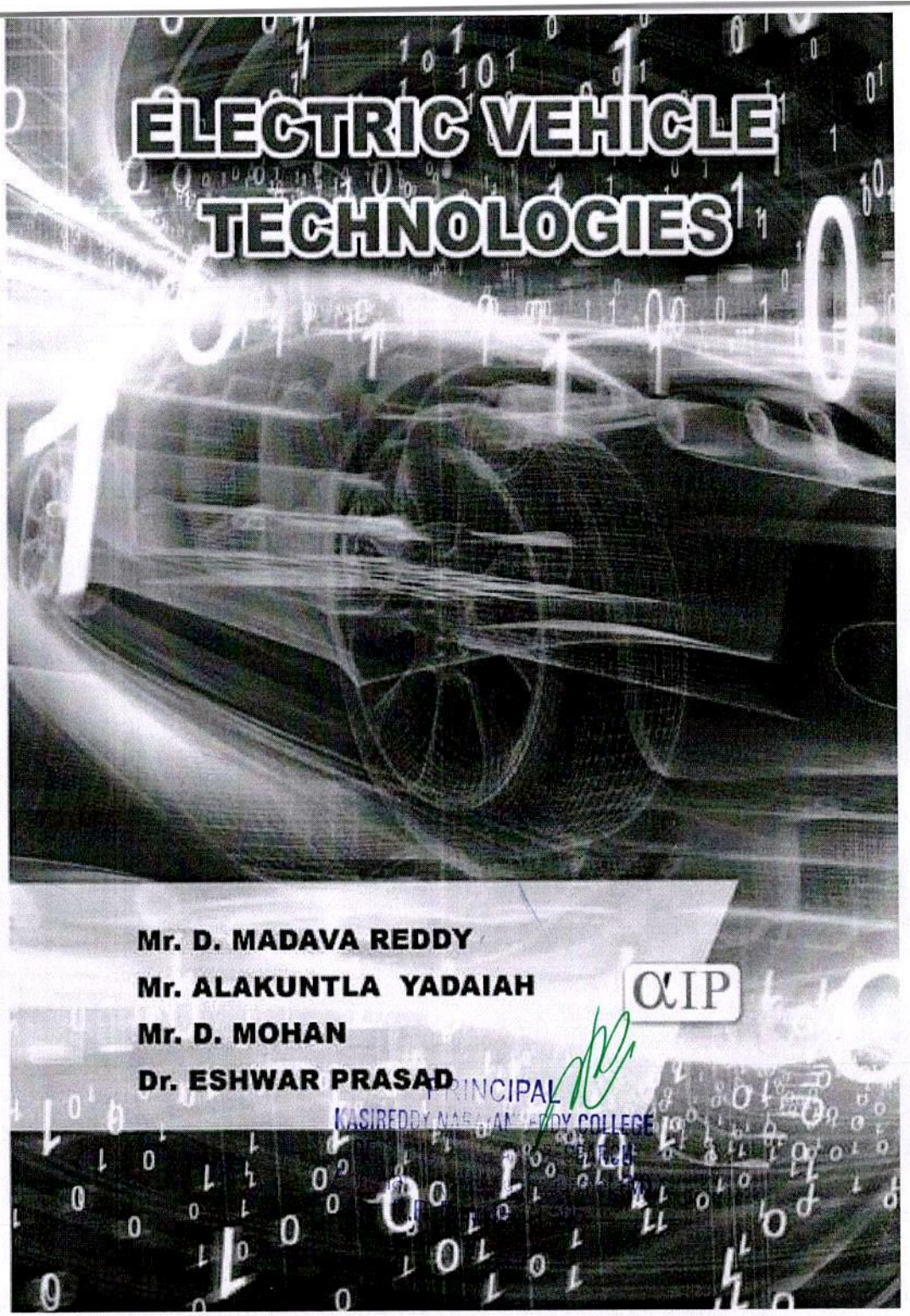

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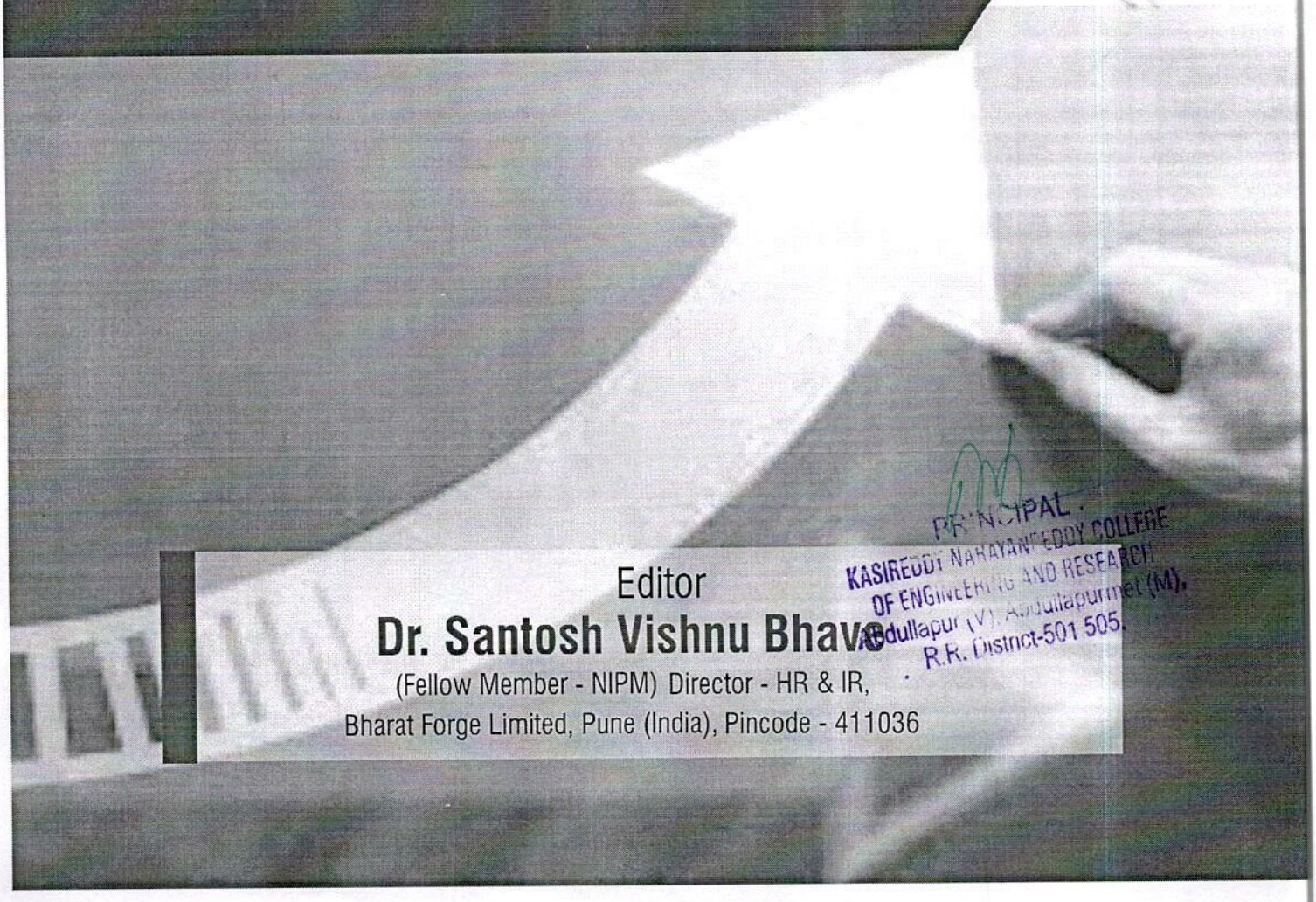

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Change Management Strategy For Sustainable Development With Specific Reference To Public Sector Airline(s)

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Abstract

The basic objective of this comprehensive research paper is to focus on the significance of the change process imitated at the public sector airlines. The policy makers have taken various proactive decisions for the development of the public sector airline(s) and the necessary directions have been issued to the management of the national and international public sector airline(s) which operate in India. The public sector airline(s) have formulated various strategic decisions like merger and implemented the change process successfully. The study is carried out at Hyderabad and Secunderabad of the State of Telangana. The rules and regulations are formulated at the head office located at New Delhi and implemented on a uniform basis throughout the entire network of the organization. An attempt is made to assess the change process implemented which contributed to the development of the organization. The sample size of the respondents is from the intellectual community, those who have reasonable awareness about the operational activities of the public sector airline(s). The data analysis was carried out and the inferences were drawn based upon the overall consistency. The study has resulted in the implementation of the change process and has significantly contributed to the development of the organization..

Key words: Change, Merger and Development

Introduction: The implementation of the economic reforms by the policy makers has created a significant positive impact on the Indian economy. All organizations including the public sectors like manufacturing, service, non government organizations, educational / research and development etc., irrespective of size, nature of activity have felt the need to restructure their operational activities in order to sustain for the development in the long run otherwise it is very difficult even to survive. The management experts of the organization systematically formulate the strategies at corporate level to initiate and diffuse the change in their respective organizations. It is not an easy task. It is an ongoing and regular process long term strategy. In the context of the global competitive scenario that exists in the business environment, the organizations are required to strengthen their capabilities at all functions in order to meet the competitive edge. The scope of the change management is very comprehensive that reflects the entire organization. There is a need for change management in order to maintain and balance the state of equilibrium through the interaction of the dynamics of the internal and external environment. The most important variables of the environment could be categorized into external factors like competitive forces, regulatory forces, political forces, economic forces, dynamic interaction of the market forces, legal factors, social and cultural forces which exist at various geographical segmentations across the globe; and the internal factors consists of change occurs in the restructure of the organization, changes in the designations of the staff at various levels, horizontal or vertical movements of staff at various staff, identification of trouble areas / spots, weak

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EMERGING TRENDS IN MECHANICAL ENGINEERING

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We would also like to take the opportunity to express our specials thanks of gratitude to the publisher for providing a golden chance by giving us the most awaited platform to showcase our novel work.

Any attempt at any level can't be satisfactorily completed without our students' collaborative effort, resulting in our Book being unique.

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PREFACE

The technological advancements to be depicted in the course called emerging trends was a challenging task and therefore it was decided to prepare a learning material with the involvement of industrial and academic experts for its uniformity in the aspect of delivery, implementation and evaluation.

Over the coming years, technological developments such as Robotics, IOT, Artificial intelligence, smart controls are likely to have a significant impact on the world of work and employment. Looking towards the era in Technological advancement, Mechanical / Automobile / Production Engineering offers addition of new Dynamic subjects and new versions of core subjects. Diploma Mechanical/Automobile/Production Engineers should be familiar with new technologies from the fields of Automobile Engineering, HVAC, Energy Management, Advanced Manufacturing Processes, Agriculture and Farm Machines and many more. This Dynamic course will give insight to the recent practices adopted by the Mechanical Industries and awareness of these techniques will enhance career opportunities of Diploma Mechanical / Automobile / Production Engineers.

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Basic English Grammar for Beginners

Basic English Grammar for Beginners

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BASIC ENGLISH GRAMMAR FOR BEGINNERS

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MESSAGE

In this era, English has become a global language for trade, culture. literature and Industry. Learning English is not an optional but a necessity. Minimum level of mastery over English Language is essential to be an effective communicator and presenter. As far as India is concerned, many students from regional medium, find verry difficult to speak and write in English. Therefore, they don't have confidence in their studies when they reach tertiary level of education. This book helps you to study the spoken and written skills easily.

This book is designed as a reliable reference book on basic knowledge of English Language structure and grammar usage with a view to promote verbal ability mainly for beginners particularly for the students who are from Tamil medium.

Suggestions for improvement and corrections in this book are welcome.

Author

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CONTENTS

ABSTRACT

Portfolio Management is used to select a portfolio of new product development projects to achieve the following goals:

- Maximize the profitability or value of the portfolio
- Provide balance
- Support the strategy of the enterprise

Portfolio Management is the responsibility of the senior management team of an organization or business unit. This team, which might be called the Product Committee, meets regularly to manage the product pipeline and make decisions about the product portfolio. Often, this is the same group that conducts the stage-gate reviews in the organization. A logical starting point is to create a product strategy - markets, customers, products, strategy approach, competitive emphasis, etc. The second step is to understand the budget or resources available to balance the portfolio against. Third, each project must be assessed for profitability (rewards), investment requirements (resources), risks, and other appropriate factors.

The weighting of the goals in making decisions about products varies from company. But organizations must balance these goals: risk vs. profitability, new products vs. improvements, strategy fit vs. reward, market vs. product line, long-term vs. short-term. Several types of techniques have been used to support the portfolio management process:

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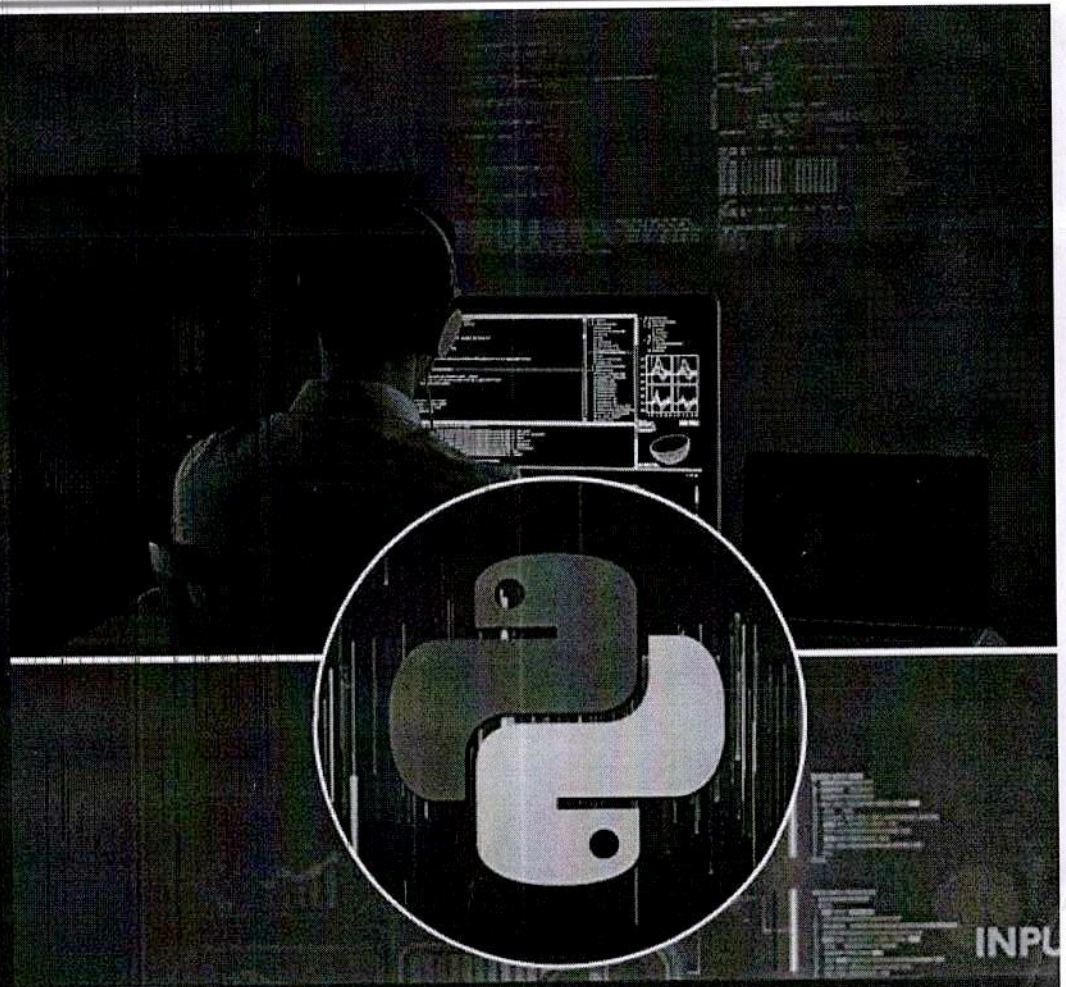

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PREFACE

This book is designed for use in courses on A beginners Guide to problem solving and programming in Python at the undergraduate/postgraduate level, particularly designed for the structured curriculum of Bachelor of Technology and Bachelor of Engineering – Computer science & Engineering

Although the contents of the book follows the essential content of complete concepts of A beginners Guide to problem solving and programming in Python is sufficiently broad in scope and rigorous in coverage to satisfy any undergraduate and postgraduate requirements in the field of IT/CSE.

The book is organized into five sections:

Chapter 1, describes about the computational strategies, Problem solving techniques, notations of an algorithm ie., Pseudocode, Flowchart, basics of python programming which covers the variables, identifiers, arithmetic operator, values & type, python statement, operator, operator precedence, expressions & statements, functions etc.,

Chapter 2, covers the data types in python, list, characteristics, string, python dictionary, modules, packages, libraries etc.,

Chapter 3, delivers the file handling & exception handling, data files in python, file operation, file methods & python exception handling etc.,

Chapter 4, covers about the python modules, listing of modules, variables in a modules, modules loading & execution, frameworks in python etc.,

Chapter 5, includes the object oriented programming in python, OOPS concept, class, inheritance, polymorphism, encapsulation, overriding methods, constructor and abstraction in python, along with some illustration programs etc.,

The analyses and discussion, covering these five sections in the various chapters of this book, are based on the readings recommended for this course. However, wherever required, we have supplemented from other sources reference. A select bibliography is given at the end of the book for reference to the authors cited in the text

I hope this thoroughly book on A beginners Guide to problem solving and programming in Python will prove handy and useful to students and teachers on the same.

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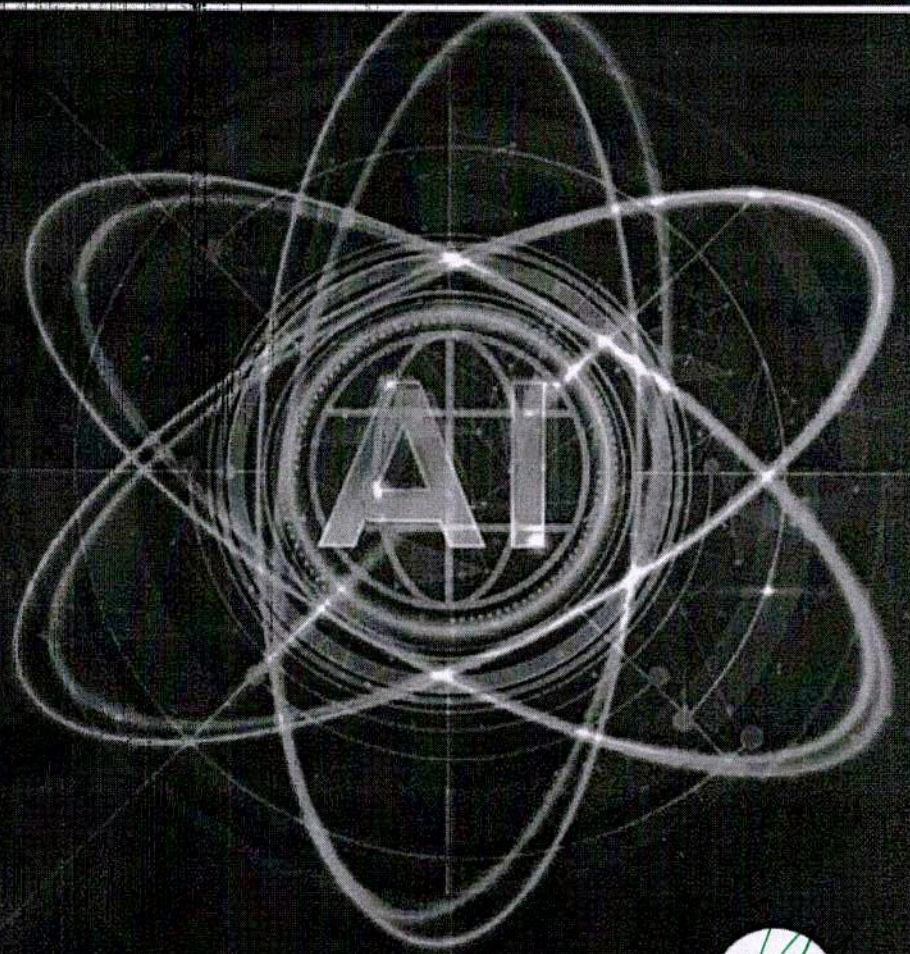

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PREFACE

This book is designed for use in courses on classical Approach to Artificial Intelligence at the undergraduate/postgraduate level, particularly designed for the structured curriculum of Bachelor of Technology and Bachelor of Engineering – Computer science & Engineering

Although the contents of the book follows the essential content of complete concepts of Artificial Intelligence is sufficiently broad in scope and rigorous in coverage to satisfy any undergraduate and postgraduate requirements in the field of IT/CSE.

The book is organized into five sections:

Chapter 1, describes Future of Artificial Intelligence, Characteristics of Intelligent Agents, Typical Intelligent Agents, Problem Solving Approach to Typical AI problems etc.,

Chapter 2, covers the Problem solving Methods, Search Strategies, Uninformed, Informed Heuristics, Local Search Algorithms and Optimization Problems, Searching with Partial Observations, Constraint Satisfaction Problems, Backtracking Search, Game Playing , Optimal Decisions in Games, Alpha – Beta Pruning , Stochastic Games etc.,

Chapter 3, delivers the First Order Predicate Logic , Prolog Programming, Forward Chaining-Backward Chaining, Knowledge Representation Ontological Engineering, Categories and Objects, Events, Mental Events and Mental Objects, Reasoning Systems for Categories and Default Information etc.,

Chapter 4, covers about the Architecture for Intelligent Agents, Agent communication, Negotiation and Bargaining, Argumentation among Agents, Trust and Reputation in Multi-agent systems. etc.,

Chapter 5, includes the AI applications, Language Models, Information Retrieval, Information Extraction, Natural Language Processing, Machine Translation, Speech Recognition, Robot, Hardware, Perception, Planning etc.,

The analyses and discussion, covering these five sections in the various chapters of this book, are based on the readings recommended for this course. However, wherever required, we have supplemented from other sources reference. A select bibliography is given at the end of the book for reference to the authors cited in the text

I hope this thoroughly book on A classical Approach to Artificial Intelligence will prove handy and useful to students and teachers on the same.

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Acknowledgment

First and foremost, praises to God, the Almighty, for his immense shower of blessing and kindness throughout the work and has allowed us to finish successfully.

We are sincerely grateful to our Institution Management, Director, Principal, Faculties, Students, and all our family members for providing continuous support and motivation during the work.

We would also like to take the opportunity to express our specials thanks of gratitude to the publisher for providing a golden chance by giving us the most awaited platform to showcase our novel work.

Any attempt at any level can't be satisfactorily completed without our students' collaborative effort, resulting in our Book being unique

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****

ABSTRACT

H.D.F.C was set up on

17 October, 1977 by 1.C.I.C.I. out of the consideration that a

specialized institution was needed to channel household savings as well as funds from the

capital market into the housing sector. H.D.F.C. has emerged as the largest mortgage

finance institution in the country. The main objective of H.D.F.C. is to develop significant expertise in retail mortgage loans to different market segments and to have a large corporate client-base its housing related credit facilities. The main aim of leading housing finance company and for all practical purposes is synonymous with the domestic housing finance industry.

The primary objective of H.D.F.C is to enhance residential housing stock and promote

home ownership. One of its major objectives is to increase flow of resources for housing through the integration of housing financial institutions with the domestic market. H.D.F.C. has developed a strong market reputation large shareholder base and unique well as in international markets. It has maintained a consistent and healthy growth in its operations to remain the clear market leader in mortgages in India.

The company has been constantly engaged into innovation and innovative practices since its birth.

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MR. SEELAM JAYADEVA REDDY (PH.D), has qualified in Master of Business Administration from the prestigious Jawaharlal Nehru Technological University, Hyderabad. and also qualified in Master Programme in commerce Presently, he is Head of the Department of MBA, designated as Associate Professor at the Department of Master of Business Administration at Kasireddy Narayan Reddy College of Engineering and Research, affiliated to Jawaharlal Nehru Technological University, Hyderabad,. He is pursuing PhD from JJTU University-Rajasthan since-2016. He is actively involved in various institutional developmental activities from time to time and contributed significantly for the development of the institution. There are certain number of publications to his credit

Mrs. G. SRIVANI is having 9 years of teaching experience and currently working as Assistant Professor in Humanities and Sciences Department at Brilliant Grammar School Educational Society's Group of Institutions-Integrated Campus, Abdullapurmet, Telangana. She had worked formerly in Nova College of Engineering and Technology. She had completed Master's Degree in Business Administration from Osmania University affiliated college. She has presented various papers in conference and symposiums.

Mr. K. VENKATESWARA REDDY, he is a young, decent, dynamic Renowned Educationist and Eminent Academician has overall 12 years of teaching Experience and currently serving as HOD and ASSISTANT PROFESSOR in the BRILLIANT INSTITUTE OF ENGINEERING AND TECHNOLOGY, Abdullapur (V), Abdullapurmet (M)), R.R Dist-501505 and mentoring experience for graduates. He has published more than 8 articles in various national and international journals and presented papers in national and international conferences too. Mr. K. VENKATESWARA REDDY is pursuing PhD from JJTU University - Rajasthan since-2016. He completed his MBA/ from JNTUH affiliated College and did his M.COM from Osmania University. He is consistently working in same college from past 12 Years He has Guided Post Graduate Level Students for their projects. In his tenure, he has successfully completed 95+ projects on various domains.

DR. D. ROSE MARY is having more than 10 years of teaching and research experience. She was UGC post doctoral fellow from Sri Krishnadevaraya University, Anantapur. She is awarded Doctor of Philosophy in the specialisation of Human Resource Management from Sri Krishnadevaraya University, Anantapur, and published more than 18 articles in reputed national and international journals. She also participated in several National and international conferences, workshops, seminars and Faculty Development Programs. Dr D. Rose Mary is currently serving as Professor in the Department of Management Studies, Sidhartha Institute of Engineering and Technology, Vinobha Nagar, Ibrahimpatnam, Telangana.

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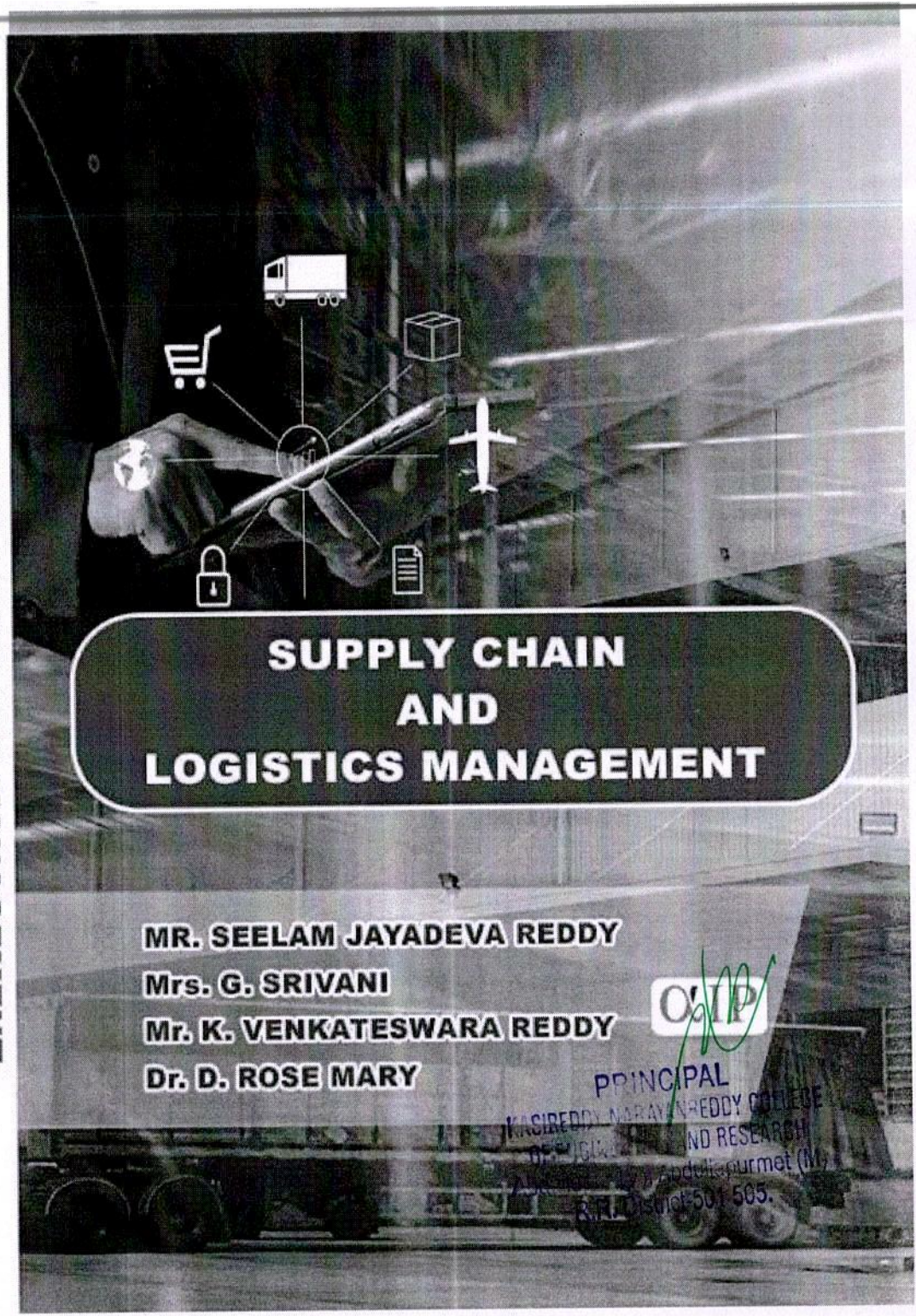

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PREFACE

I feel encouraged by the widespread response from teachers and students alike to the first edition. I am presenting thoroughly revised and enlarged, to my readers in all humbleness. All possible efforts have been made to enhance further the usefulness of the book. The feedback received from different sources has been incorporated

This book on **Supply Chain and Logistics Management** my ambition in life is to publish a book on **Supply Chain and Logistics Management**. This is a wonderful subject, but unfortunately remained an anathema for several courses. From my interaction with the students I could understand that the reason for fearing this subject is the difficultly in comprehending the subject matter. Further, the language used in the books on this subject is reported to be very complex. So the basic objective kept in mind while preparing this book was to present the subject matter in a very simple and lucid language. As part of simplification effort, throughout the text, a number of examples have been given to make the understanding easy.

The distinguishing feature of this book is that the subject matter has been introduced in a gradual manner and at the end of each chapter short answer type questions and essay type questions have been given in such a manner that the students can easily understand the subject matter in depth. This will be more useful to the students who aspire for competitive examinations. Moreover, to test the understanding of the students and to have sufficient practice, have also been given at the end of each chapter. I hope this book will be highly useful to the students of Commerce and Management.

Considering the importance of the **Supply Chain and Logistics Management** most Universities have included "**Supply Chain and Logistics Management**" as one of the subjects in their Graduate Programmes such as B.Com. B.Com.(CA), M.Com.(CA), BBA., and MBA., (Management and Commerce).

This book provides strong conceptual framework for the study and understanding of the various aspects of **Supply Chain and Logistics Management**. I hope that the book would be useful to students, teachers and the Supply Chain and Logistics Management.

I register my profound sense of gratitude to the professors for their co-operation and encouragement in writing this book and also for familiarizing this book among the students.

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SYLLABUS

CHAPTER – I

Introduction to Supply Chain Management (SCM): Concept of SCM – Components – Features – Strategic issues in SCM, The Supply Chain Revolution - Customer focus in SCM , Demand Planning, Purchase Planning – Make or Buy Decision – Indigenous and Global Sourcing, Development and Management of Suppliers – Legal Aspect of Buying – Cost Management- Negotiating for Purchasing and Sub Contracting – Purchase Insurance – Evaluation of Purchase Performance.

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ABSTRACT

The basal finance declaration like Antipode Breadth and Profit & Loss A/c or Income Anniversary of business make known the net after consequence of different diplomacy on operational and finance position of the company. The antipode breadth gives an approximate of the assets & responsibility of a chance at a accurate point of time. Here is abounding diplomacy that crop abode in a chance and that will not achieve Profit & Loss A/c. Thus, accession anniversary is able to actualization the alter in Assets & Liabilities by the end of one aeon of time to the end of accession aeon of time. The anniversary is declared an anniversary of alter in finance position or a Funds Flow Statement. The Funds Flow Anniversary is an anniversary which credible the movement of funds and is a abode of finance operations of business undertaking. In simple words it is an anniversary of anterior and accoutrement of funds.

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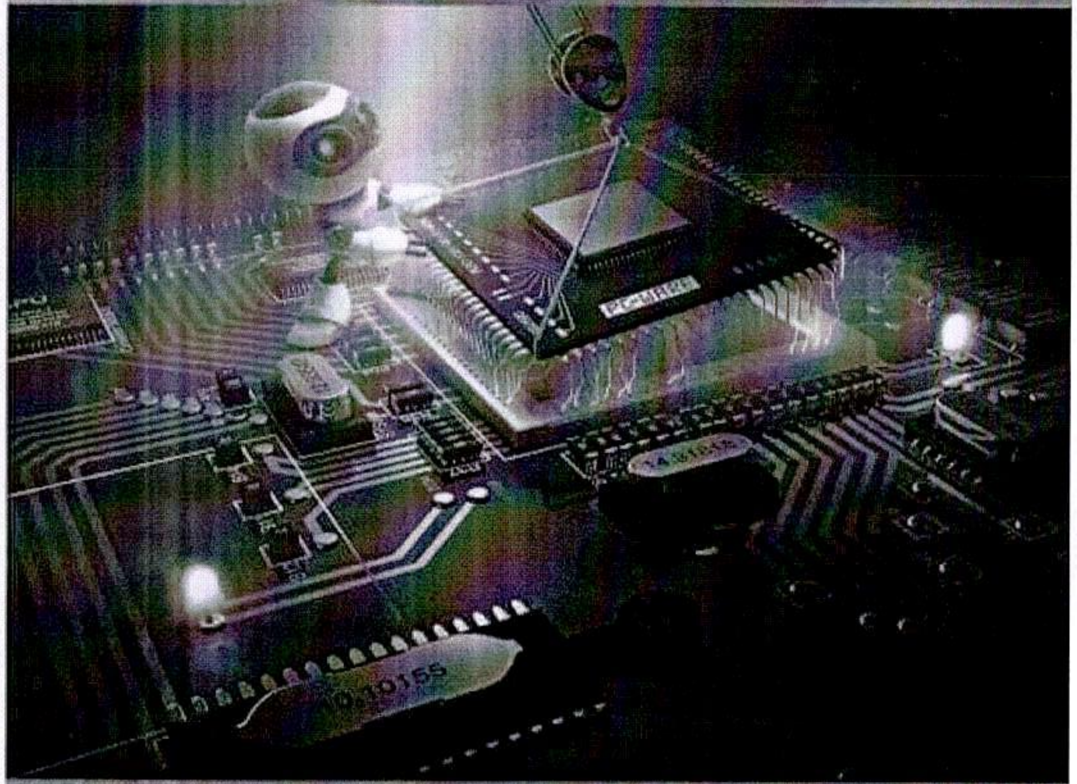

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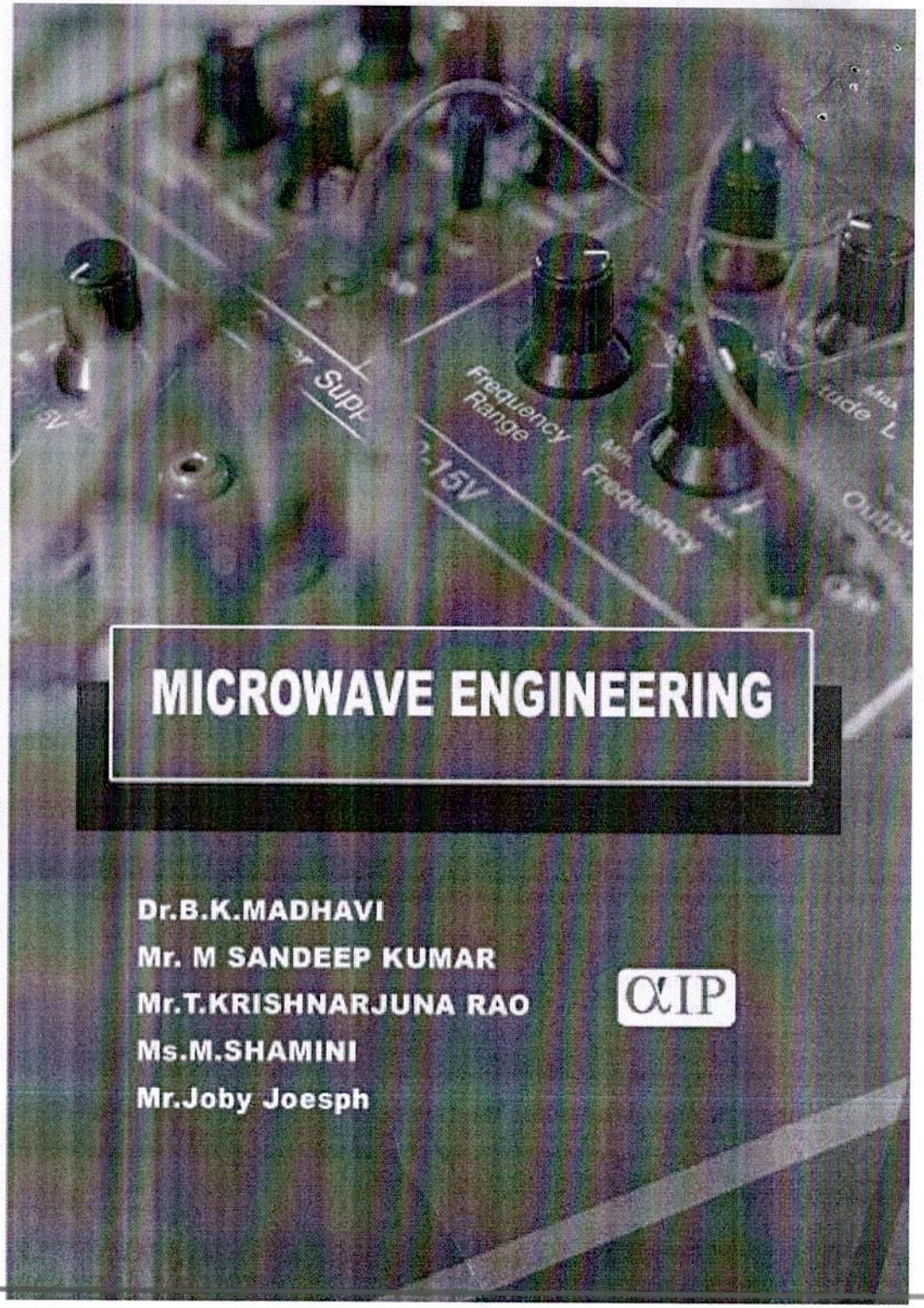

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PREFACE

Abundance technical books on microwave and millimeter wave communication are available in the market and online, then why this kind of book again? Well, here is the emphasizing answer to this- it is not another book of that kind which is available in any forms nowadays!! This is the book which takes the reader from the basics of microwave communication, where the student's hunt of such a book comes to an end here. The book's overall approach, refined by the authors' experience with large sections of undergraduates from various universities, addresses the challenges of teaching and learning when prerequisite knowledge varies greatly from student to student. This book can be read by ordinary people with a limited, if any, scientific background. Throughout, the book has been written with this audience in mind. At times, the science presented might seem overwhelming: Some chapters are very light and can be easily understood by a layperson. One of the important features of this book is that it does not have a textbook structure when the chapters, in order to be understood, need to be read in the sequence given. In fact, you can start the journey from any chapter, based on your interests, tastes, and preferences. But I do hope that the information and knowledge presented here will become a wake-up call for the students who were eager to know the basics of microwave and millimeter wave circuits theory.

Spread across five simpler units for better understanding the contents, Chapter 1 illustrates the overview of the microwave transmission and outlines the basic concepts right from general microwave communication. It also briefly describes about the various modes and network parameters.

Chapter 2 describes about the various microwave passive devices, which includes the detailed explanation of their operation and construction. This chapter also examines the use of various active microwave devices along with the detailed explanation of construction and network parameters.

Chapter 3 starts with the introduction to wave propagation in microstrip lines. It also explains about the various discontinuities in waveguides and the obstacles. Furthermore, detailed description of microwave system is also provided along with the fundamental parameters.

Chapter 4 focuses right from the beginning in the periodic structures and their analysis. Later the paraphrasing shifts to the microwave filters and their implementation and transformations.

Chapter 5, the last chapter of the book, focuses on the importance of microwave and millimeter wave integrated circuits in modern technology. It provides an in-depth discussion about the applications and design considerations.

Even though extreme care has been taken while editorializing this book manuscript, there are chances that a few hidden errors that might have crept inadvertently. It's much obliged if these are pointed out to the author. Fundamental to a book's effectiveness is classroom use and feedback suggestions to improve the quality of the contents of the book will be highly appreciated.

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Author's Profile

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Text Book of Electrical Technology and Utilization

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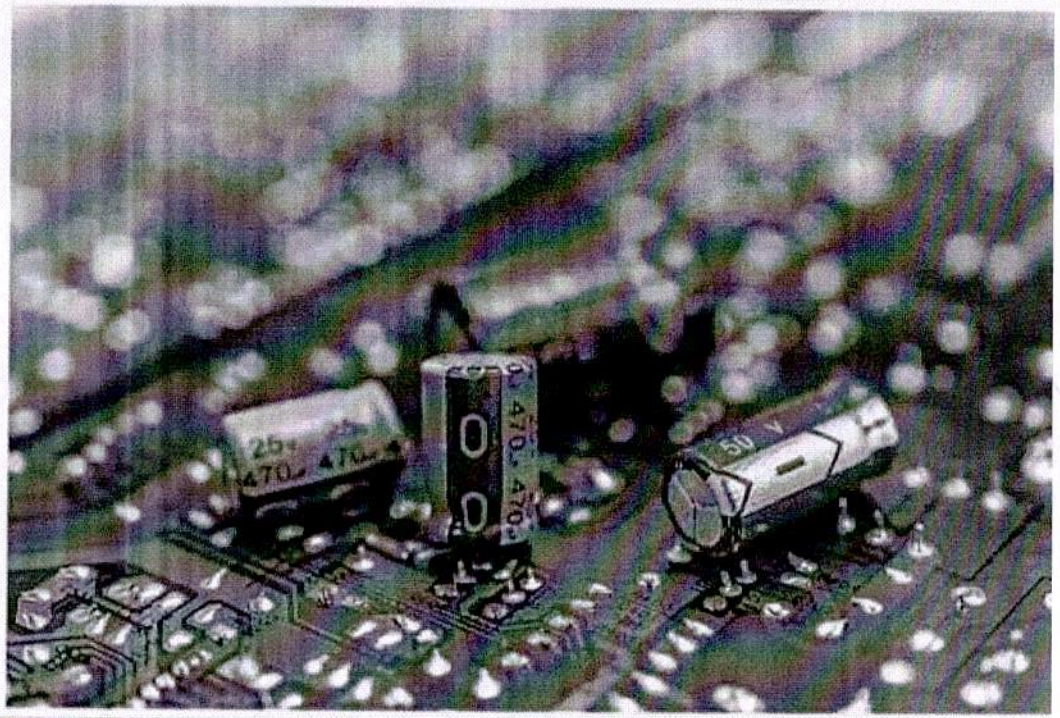

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TEXT BOOK OF ELECTRICAL TECHNOLOGY AND UTILIZATION

FIRST EDITION

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SYLLABUS

I DISTRIBUTION

Substation: Introduction-Sub stations-classification of sub stations-Indoor and outdoor S.S – Gas insulated S.S-comparisons-Layout 110/11KV Substation and 11KV/400V Distribution Substation-substation equipments-Bus bar- Types of bus bar arrangement -Advantages and Disadvantages. **Distribution:** Distribution system-Requirements of a Distribution system-part of Distribution system- classification of Distribution systems-comparison of different distribution systems (A.C and D.C) -A.C Distribution -Types-connection schemes of Distribution system-A. C Distribution calculations-Calculation of voltage at load points on single phase distribution systems (With concentrated load only)- Distribution fed at one end, both ends and ring mains-problems- Three phase, four wire, Star connected unbalanced load circuit- Problems- consequence of Disconnection of Neutral in three phase four wire system (illustration with an example)

II INDUSTRIAL DRIVES

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III ELECTRIC TRACTION

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control series- parallel control- Energy saving with series parallel starting - Shunt Transition -Bridge- Transition- multiple unit control –Regenerative braking. Recent trends in Electric Traction-Magnetic Levitation (MEGLEV) - Suspension systems.

IV ILLUMINATION

Introduction - Definition and units of different terms used in illumination-plane Angle, Solids angle, Light, Luminous flux, Luminous Intensity, Luminous Efficacy candle power, Lumen, Illumination,M.S.C.P, M.H.C.P, M.H.S.C.P- Reduction factor, Luminance, glare Lamp efficiency. Space-height ratio, Depreciation factor Utilization factor, waste light factor, Absorption factor, Beam factor, Reflection factor- Requirements of good lighting system- Laws of Illumination-problems. Types of lighting scheme-Factors to be considered while designing lighting scheme- Design of lighting Scheme (Indoor and outdoor)- Problems- Lighting systems- Factory lighting, Flood lighting, Street lighting. Sources of light-Arc lamp, Incandescent lamp, Halogen Lamp, Sodium vapour lamp, High pressure mercury vapour lamp, Fluorescent Tube –Induction Lamp- Energy saving lamps (C.F.L and L.E.D lamps)-limitation and disposal of C.F.L-benefits of led lamps-comparison of lumen output for led CFL and incandescent lamp.

V ELECTRIC HEATING AND WELDING

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Electric welding: Introduction-Types of Electric welding-Requirements of good weld- Preparation of work -Resistance welding- Butt welding, Spot welding, Seam welding, Projection welding and Flash welding-Arc welding-Carbon Arc welding, metal Arc welding, Atomic hydrogen Arc welding, Inert gas metal arc welding- Comparison between Resistance and Arc welding. Radiation welding - Ultrasonic welding, Electron beam welding, LASER beam welding-Electric welding equipment (A.C. and D.C).

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MANAGEMENT FUNDAMENTALS AND ORGANIZATIONAL BEHAVIOUR

MANAGEMENT FUNDAMENTALS AND ORGANIZATIONAL BEHAVIOUR

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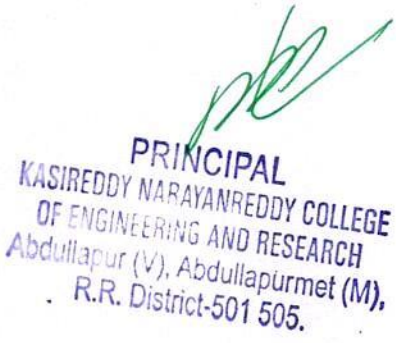
Any attempt at any level can't be satisfactorily completed without our students' collaborative effort, resulting in our Book being unique.



Preface

This book " **Management Fundamental and Organizational Behavior** " is about achieving behavioral change in organizations. Based on scientifically validated principles, it provides a specific, practically applicable answer to the "how" question of behavioral change. This distinguishes this book from many other management books.

Management Fundamental and Organizational Behavior for short, is the field that deals with behavioral change in organizations. Some prefer to speak of "targeted behavioral influence". The author's approach is balanced between management and psychological perspective and is pedagogically enhanced with up-to-date illustrative examples, case studies, and assessment material.

It can be defined as the study of the way different individuals interact with each other in a group. The main objective of the study of this subject is to create a more efficient organization. The main logic behind the study of organizational behavior is that the various scientific methods can be implemented successfully in the management of workers. The different theories of organizational behavior are implemented for the human resource so that the performance, efficiency, and output can be maximized from individual group members.Existing literature on organizational behaviour is either lopsided or ignores the management dimensions.

CONTENT

ABSTRACT

Working Capital may be regarded as the most important factor of a business. Its effective provision and utilization can do much to ensure the success of a business.

While the efficient management may not only lead to loss of projects but also to the ultimate shown fall of what otherwise would be considered as promising concern. A study on working capital is of major importance, because of its close relationship with current day-today operations of a business. The team working capital stands for that form of capital which is required for the financially of working or current need of the company. It is usually invested in raw material work in progress finished goods accounts receivable and saleable securities.

Management of working capital usually involves planning and controlling current assets, namely cash and marketable securities, assets receivable and inventories and also administration of current liabilities.Working Capital or current assets management is one of the most important aspect of the over all financial management. It is concerned with the problem that arises in attempting to manage the current assets.

The current liabilities and the inter relationships that exists between them. Current assets are the assets, which can be converted into cash with in an Accounting year and includes cash short-term securities, debtors, bill receivable and inventories.

Current liabilities are that claim of outside, which are expected to mature for payment with in an Accounting year and includes creditor's bill payable and outstanding expenses.

The goal of working capital management is to manage the firms current assets and current

Liabilities in such a way enough to cover its current liabilities in order to ensure that they are obtained and used in the best possible way.

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Dr. ASHOK KUMAR NALLAGONDA currently working as Assoc. Prof. in KASIREDDY NARAYANREDDY COLLEGE OF ENGINEERING AND RESEARCH received his B.Tech degree in Electronics and Communication Engineering in 2005 from Acharya Nagarjuna University, Guntur, and Andhra Pradesh, India. He received M. Tech Degree in Radar & microwave Engineering in 2008 and Ph. D. in CMOS IMAGE PROCESSOING in 2017 from DELHI TECHNOLOGICAL UNIVERSITY DELHI, India. Dr. Nallagonda served as an Assistant Professor from 2008 to 2017 in AVANTHI GROUP OF INSTITUTIONS and presently, working as an Associate Professor in the Department of ECE at KASIREDDY NARAYAN REDYY COLLGE OF ENGINEERING AND REASERCH, affiliated to JNTU Hyderabad, India. His research interests include Image Processing, Antennas, Radar Systems, Microwave Engineering As of today, he has published more research papers in various international conferences, journals, and book chapters. He is also served as a reviewer for several conferences.

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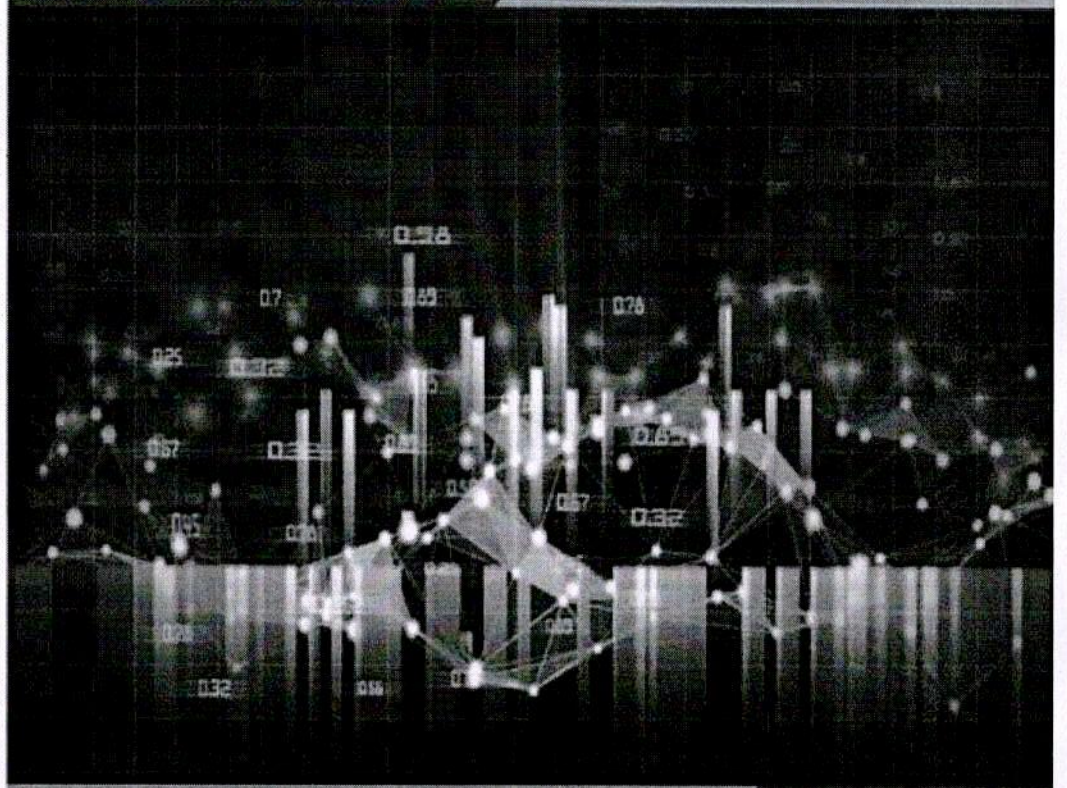

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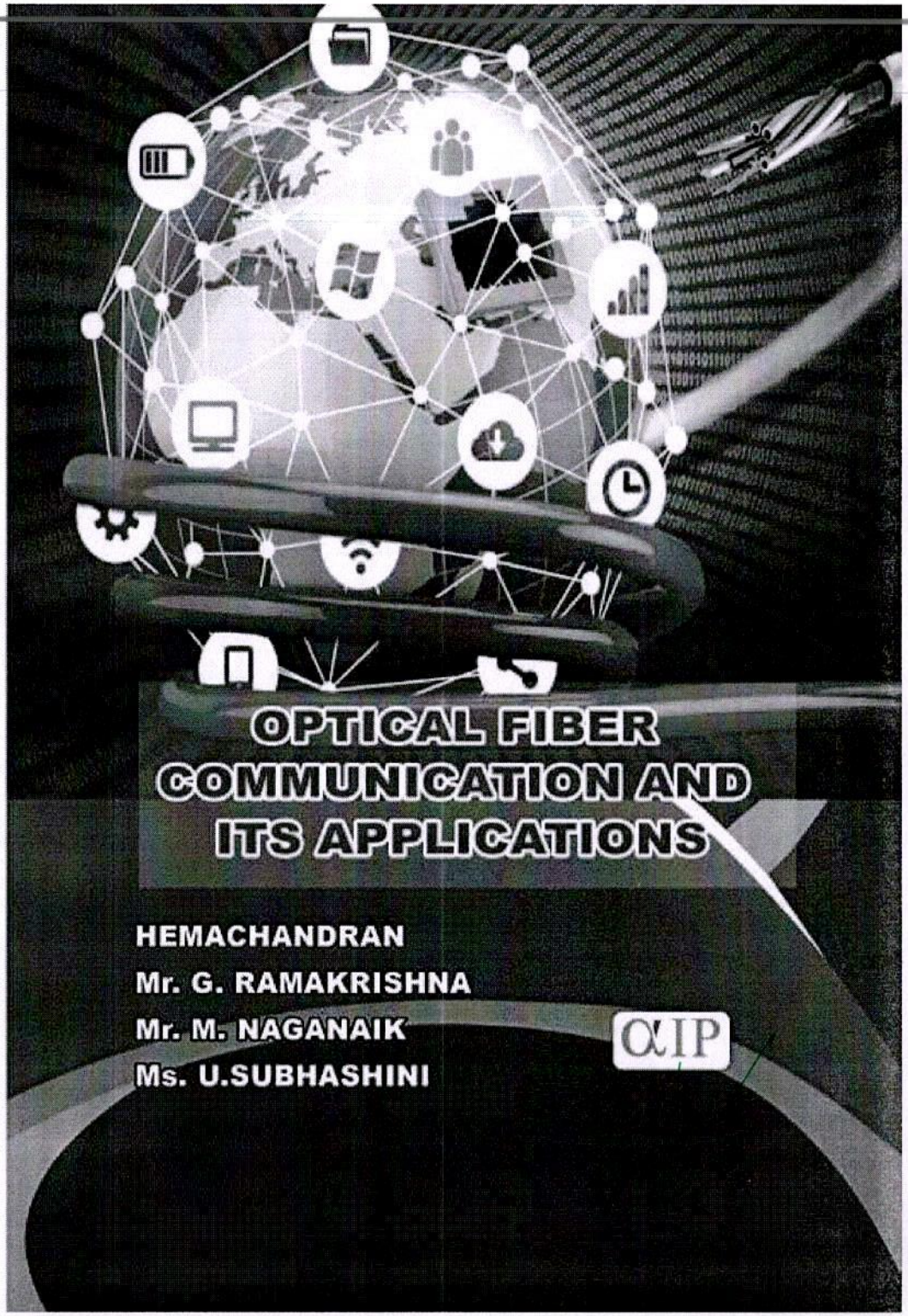

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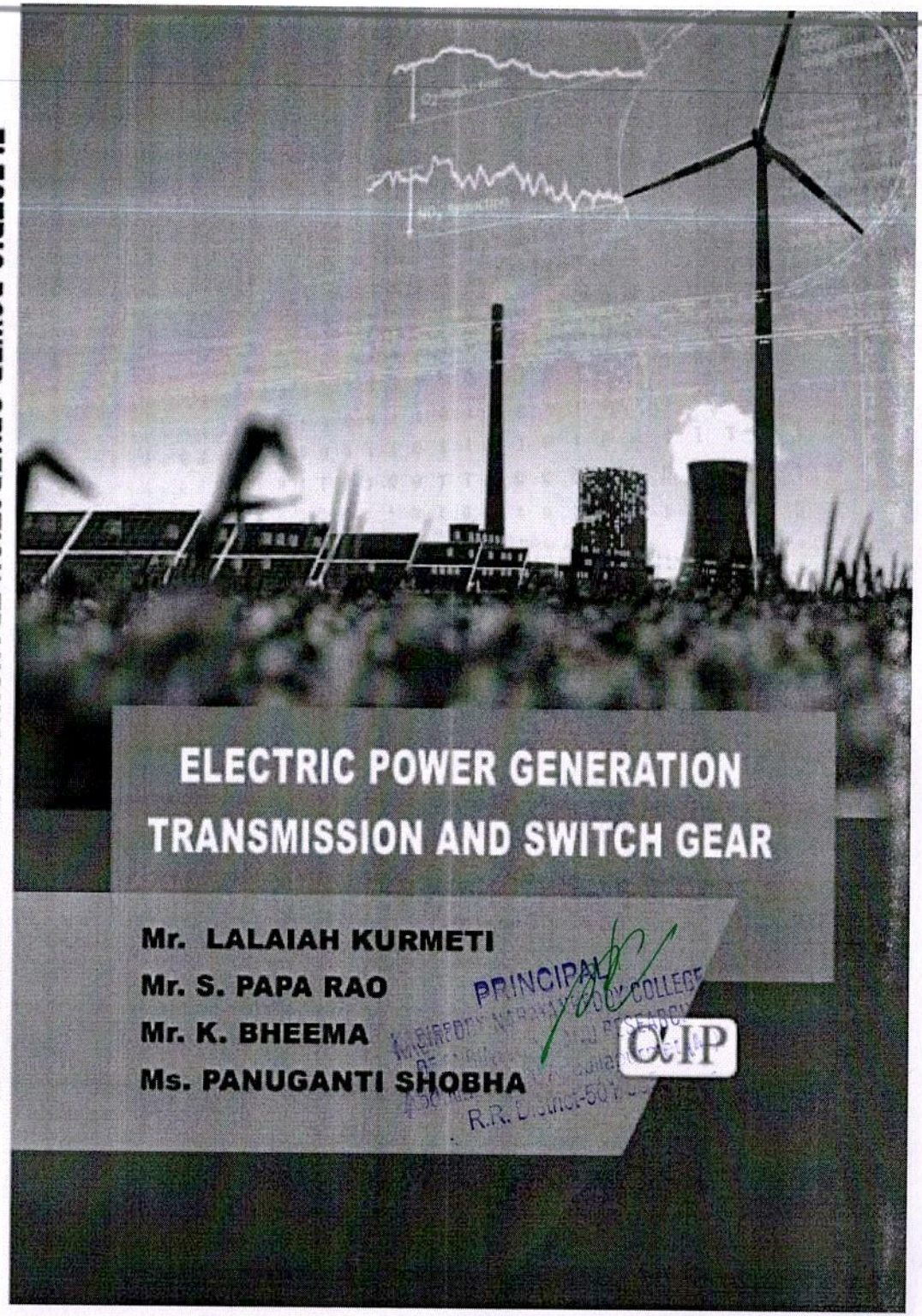

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SYLLABUS

UNIT 1 - GENERATION OF ELECTRICAL POWER

Introduction- Conventional methods of power generations – schematic arrangement and choice of site for Hydel, Thermal, Nuclear power plants-Advantages and Disadvantages-comparison of these power plants - Principle and types of co-generation. Schematic arrangement of Diesel, Gas, Pumped storage schemes-Advantages and Disadvantages-Renewable Energy sources Basic principle of Solar Energy, Grid Connected Solar PV System, Standalone Solar PV System, Hybrid Solar PV System, Wind Power Generation. Grid or Inter connected system-Advantages of Inter connected systems- Load Transfer through Inter connector-Load curves and Load duration curves-connected load-Average load-Maximum Demand Factor- Plant capacity factor-Load factor and its significance-Diversity factor Tariff – Types- Factors influencing tariff, Simple problems - Load sharing between base load and peak load plants-Load Dispatching center standalone system.

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UNIT 3 -- LINE INSULATORS AND UNDERGROUND CABLES

Line Insulators: Introduction - Line Insulator materials-Properties of Insulators Types & causes of failure of Insulators-Testing of Insulators-Potential Distribution over suspension Insulator string-String Efficiency - Methods of improving string efficiency- problems. **Underground cables:** Introduction-Advantages and requirement of cables-construction- of a three core cable-Insulating materials for cables properties of Insulating materials used in cables-classification of cablescables for three phase service-construction of Belted cable,

screened cable, Pressure cables-Laying of underground cables-Direct laying, Drawing system, Advantages and Disadvantages-Grading of cables- capacitance grading, Inter sheath grading (No derivation and Problems)-cable faults-O.C, S.C and Earth faults.

UNIT 4 - CIRCUIT BREAKERS AND OVER VOLTAGE PROTECTION

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UNIT 5 -- PROTECTIVE RELAYS AND GROUNDING

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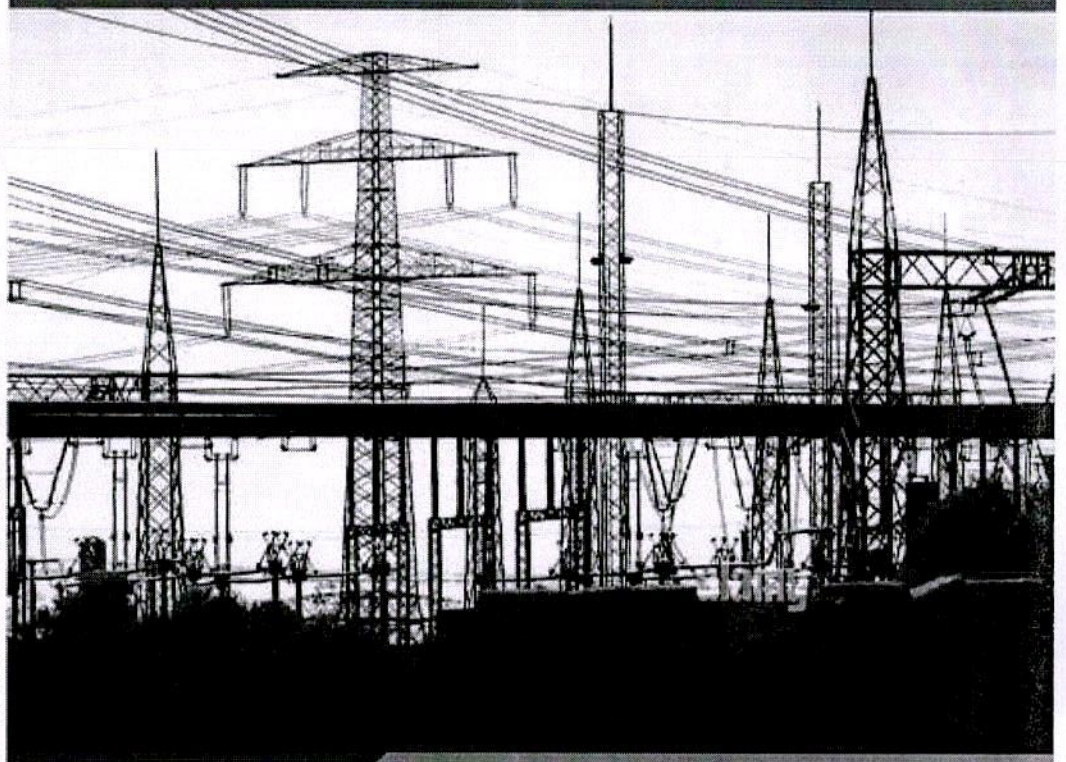

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SYLLABUS

I DISTRIBUTION

Substation: Introduction-Sub stations-classification of sub stations-Indoor and outdoor S.S – Gas insulated S.S-comparisons-Layout 110/11KV Substation and 11KV/400V Distribution Substation-substation equipments-Bus bar- Types of bus bar arrangement -Advantages and Disadvantages. **Distribution:** Distribution system-Requirements of a Distribution system-part of Distribution system- classification of Distribution systems-comparison of different distribution systems (A.C and D.C) -A.C Distribution -Types-connection schemes of Distribution system-A. C Distribution calculations-Calculation of voltage at load points on single phase distribution systems (With concentrated load only)- Distribution fed at one end, both ends and ring mains-problems- Three phase, four wire, Star connected unbalanced load circuit- Problems- consequence of Disconnection of Neutral in three phase four wire system (illustration with an example)

II INDUSTRIAL DRIVES

Introduction-Electric drive- Advantages-parts of Electric drives-Transmission of power-Types of Electric drives-Individual, group and multi motor drives – Advantages and disadvantages of Individual and group drive - Factors governing the selection of motors-Nature and classification of load Torque-Matching of speed Torque characteristics of load and motor-Standard ratings of motor- classes of load duty cycles-Selection of motors for different duty cycles-Selection of motors for specific application-Braking-Features of good braking system- Types of Braking- Advantages of- Electric braking-Plugging, Dynamic and Regenerative braking-As applied to various motors.

III ELECTRIC TRACTION

Introduction-Traction systems-Advantages and Disadvantages of Electric Traction. System of Track Electrification: Methods of supplying power-Rail connected system and over head system-O.H. equipments-contact wire, centenary and dropperscurrent collection gear for OHE-Bow and pantograph collector-Different systems of Track Electrification-Advantages of single phase low frequency A. C. system- Booster Transformer-Necessity- Methods of connecting B.T-Neutral sectioning. Traction Mechanics:Units and notations used in Traction mechanics-Speed time curve for different services - simplified speed time curve-Derivation of maximum speed-crest speed, Average speed, Schedule speed (definitions only)-Tractive effort and power requirement- Specific energy output- specific energy consumption. Traction motors and control: Desirable characteristics of Traction motors-Motors used for Traction purpose-Methods of starting and speed control of D.C Traction motors- Rheostatic Control-energy saving with plain rheostatic

control series- parallel control- Energy saving with series parallel starting - Shunt Transition -Bridge- Transition- multiple unit control –Regenerative braking. Recent trends in Electric Traction-Magnetic Levitation (MEGLEV) - Suspension systems.

IV ILLUMINATION

Introduction - Definition and units of different terms used in illumination-plane Angle, Solids angle, Light, Luminous flux, Luminous Intensity, Luminous Efficacy candle power, Lumen, Illumination,M.S.C.P, M.H.C.P, M.H.S.C.P- Reduction factor, Luminance, glare Lamp efficiency. Space-height ratio, Depreciation factor Utilization factor, waste light factor, Absorption factor, Beam factor, Reflection factor- Requirements of good lighting system- Laws of Illumination-problems. Types of lighting scheme-Factors to be considered while designing lighting scheme- Design of lighting Scheme (Indoor and outdoor)- Problems- Lighting systems- Factory lighting, Flood lighting, Street lighting. Sources of light-Arc lamp, Incandescent lamp, Halogen Lamp, Sodium vapour lamp, High pressure mercury vapour lamp, Fluorescent Tube –Induction Lamp- Energy saving lamps (C.F.L and L.E.D lamps)-limitation and disposal of C.F.L-benefits of led lamps-comparison of lumen output for led CFL and incandescent lamp.

V ELECTRIC HEATING AND WELDING

Electric Heating: Introduction -Advantages of Electric heating-modes of heat transfer- classification of Electric Heating - Power frequency electric heating- Direct and Indirect resistance heating-Infrared heating-Arc heating –High frequency Electric heating- Induction heating-Induction Stove –Eddy current heating and Dielectric heating.

Electric furnaces: Resistance furnace-Requirements of Heating elements-commonly used heating element materials-Resistance furnace for special purposes-Temperature control of resistance furnace-Arc furnace -Direct and Indirect Arc furnace- Temperature control of Arc furnace-Reasons for employing low voltage and high current supply - Induction furnace-Direct and Indirect core type Induction furnace coreless Induction furnace-Power supply for coreless Induction furnace.

Electric welding: Introduction-Types of Electric welding-Requirements of good weld- Preparation of work -Resistance welding- Butt welding, Spot welding, Seam welding, Projection welding and Flash welding-Arc welding-Carbon Arc welding, metal Arc welding, Atomic hydrogen Arc welding, Inert gas metal arc welding- Comparison between Resistance and Arc welding. Radiation welding - Ultrasonic welding, Electron beam welding, LASER beam welding-Electric welding equipment (A.C. and D.C).

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Date: -12-2022

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