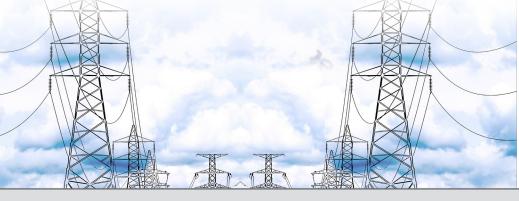
A Handbook on

Electrical Engineering



Contains well illustrated formulae & key theory concepts

_____ For _____

IES, GATE, PSUs

& OTHER COMPETITIVE EXAMS





MADE EASY Publications

Corporate Office: 44-A/4, Kalu Sarai (Near Hauz Khas Metro Station), New Delhi-110016

E-mail: infomep@madeeasy.in

Contact: 011-45124612, 0-9958995830, 8860378007

Visit us at: www.madeeasypublications.org

A Handbook on Electrical Engineering

Copyright © 2014, by MADE EASY Publications.

All rights are reserved. No part of this publication may be reproduced, stored in or introduced into a retrieval system, or transmitted in any form or by any means (electronic, mechanical, photo-copying, recording or otherwise), without the prior written permission of the above mentioned publisher of this book.

First Edition: 2012

Reprint: 2013 Reprint: 2014

Second Edition: Nov. 2014

Preface

The objective of this book is to provide the crux of Electrical Engineering in a concise form to the students to brush up the formulae and important concepts required for IES, GATE, PSUs and other competitive examinations. The Handbook contains all the formulae and important theoretical aspects of Electrical



Engineering. It will provide much needed revision aid and study guidance before examinations. The specific presentation will help the readers to resurrect the concepts easily. The book covers the syllabus of UPSC Engineering Services exam, GATE and other competitive exams.

Special "Notes" are given in order to emphasize the specific content and helpful to resurrect in short span. Some quick tricks have also been introduced to save time.

Any error in printing/calculations/concepts pointed out by the reader will be acknowledged with thanks by MADE EASY.

B. Singh

CMD, MADE EASY Group

CONTENTS

Unit-I: Power Systems7-74
Unit-II: Electrical Machines75-137
Unit-III: Power Electronics
Unit-IV: Measurement & Instrumentation219-288
Unit-V: Network Theory289-333
Unit-VI: Control Systems334-385
Unit-VII: Signals & Systems386-411
Unit-VIII: Analog Electronics412-446
Unit-IX: Digital Electronics447-506
Unit-X: Electrical Materials507-533
Unit-XI: Electromagnetic Theory534-563
Unit-XII: Microprocessors564-592
Unit-XIII: Communication Systems593-611

#