

PRACTICAL MANUAL OF PRINCIPLES OF ELECTRICAL ENGINEERING

ET-115

Diploma of Associate Engineer
Civil Technology

11



PRACTICAL MANUAL OF
Principles of Electrical Engineering ET-115



قومی ترانہ

پاک سرزمین شاد باد! کشورِ حسین شاد باد!
تو نشانِ عزمِ عالی شانِ ارضِ پاکستان
مرکزِ یقینِ شاد باد
پاک سرزمین کا نظامِ قوتِ اخوتِ عوام
قوم، ملک، سلطنتِ پائندہ تابندہ باد!
شاد باد! منزلِ مراد
پرچمِ ستارہ و ہلالِ رہبرِ ترقی و کمال
ترجمانِ ماضی شانِ حالِ جانِ استقبال
سایہِ خدائے ذوالجلال



NATIONAL BOOK FOUNDATION
ISLAMABAD

Islamabad, Rawalpindi, Wazirabad, Wah Cantt, Faisalabad, Multan,
Peshawar, Abbottabad, Dera Ismail Khan, Karachi, Sukkur, Rohri, Hyderabad,
Larkana, Jacobabad, Khairpur, Quetta

TECHNICAL EDUCATION & VOCATIONAL TRAINING AUTHORITY
PUNJAB

Practical Manual of
Principles of Electrical Engineering
ET-115

Diploma of Associate Engineer
Civil Technology

11



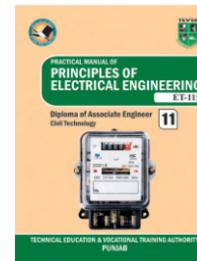
TECHNICAL EDUCATION & VOCATIONAL TRAINING AUTHORITY
PUNJAB



NATIONAL BOOK FOUNDATION
ISLAMABAD

© 2014 National Book Foundation, Islamabad. All rights reserved. This volume may not be reproduced in whole or in part in any form without prior written permission from the publisher.

Practical Manual of
Principles of Electrical Engineering
ET-115



Cover designed by: Hafiz Rafiuddin, Shahzad Ahmed

First Edition

Qty: 10000
Code: STE-536
Price: 140/-
ISBN: 978-969-37-0717-5
Printer:

For information about other National Book Foundation Publications, visit our
Web site <http://www.nbf.org.pk> or call 92-51-9261125
or Email us at: books@nbf.org.pk