

Preface

In its endeavor to improve the quality of craftsmen training in the Industrial Training Institutes (ITI's), Directorate General of Employment and Training (DGET), under the Ministry of Labour and Employment, Government of India introduced the scheme "Centers of Excellence" initially in 100 selected ITI's in the country, which later expanded to 500 ITI's. The number is growing further with more and more ITI's opting for this scheme. The core objective of the scheme is to produce multi-skilled workforce of world standard, who can face ever changing technological challenges.

The highlight of the scheme is the introduction of multi-skilling courses (Broad-based basic training) of one-year duration followed by advanced / specialized modular courses subsequently by adopting industry-wise cluster approach and multi-entry and multi-exit provisions. The various sectors chosen for training include Production & Manufacturing, Electrical, Electronics, Automobiles, Fabrication (Fitting & Welding), Chemical, Information Technology, Refrigeration & Air Conditioning etc.

The theory curriculum of the first year broad-based basic training in all sectors includes "Workshop Calculation & Science" (2 hours per week) and "Engineering Drawing" (2 hours per week). The trainees have to appear for a 4-hour duration paper in the final trade test which covers both these subjects.

In order to assist the trainees joining Electrical and Electronics sectors, which are among the most popular sectors, to prepare for this common question paper, this book has been written by the authors who have decades of experience of working closely with vocational training. The book covers the prescribed syllabus for both these sectors for the trainees to easily comprehend the key elements and practice through large number of exercises and problems included.

It is sincerely hoped that this volume will be of great assistance to the trainees in learning and comprehending the subject matter and prepare well for the trade test. We would obviously welcome suggestions for improvement of the contents and style of presentation in this book. This would help us make further improvements in subsequent editions.

— Authors

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