

Preface to Latest (NSQF Level-5 Compliant) Edition

Directorate General of Training (DGT) under the Ministry of Skill Development & Entrepreneurship, being the apex organization for development and coordination of vocational training at the national level, undertakes steps from time to time to improve its various aspects in line with changing market and industry requirements. DGT initiated the process of incorporating the concept of competency based curricula. In order to do so, the curriculum of each CTS trade has been reoriented with appropriate National Skill Qualification Framework (NSQF) level. The curricula of all CTS trades have already been made NSQF compliant.

Electrician trade has been made NSQF Level 5 compliant under Power Sector.

New Re-designed syllabus by CSTARI (Central Staff Training and Research Institute) has been recommended by D.G.T., Skill Development and Entrepreneurship Ministry, Govt. of India, Common for 1st Year of all Engineering Trades separately; and sector-wise separate syllabus for 2nd Year.

The examination pattern for 2nd year will be of conventional type (not multiple choice questions type), i.e., the trainees will have to draw drawings for the questions asked in the examination paper, whereas MCQs will be asked in examination for 1st Year. Thus, this new edition has been conceived and presented according to these requirements.

It is hoped that the trainees and instructors will definitely be benefited with this effort. We regret for any possible mistake in presentation, printing or editing of the book and suggestions for their removal will be suitably acknowledged.

– Authors

Contents

Topics

Page No.

NSQF (Level-5) Compliant Competency based Curriculum for Engineering Drawing (Core Skills) (v-vi)

1st Year

1. Introduction to Engineering Drawing, its Importance, Relationship to other Drawing Types	3-5	10. Free-Hand Drawings	55-57
2. Drawing Instruments, their Standard and Uses	6-10	11. Method of Presentation of Engineering Drawing ...	58-72
3. Conventional Lines, Breaks and Material Symbols	11-14	12. Symbolic Representation	73-86
4. Practice of Lettering and Title Block	15-18	13. Scale	87-90
5. Drawing Lines of given Length, Straight and Curved	19-20	14. Dimensioning Practice	91-96
6. Drawing Parallel Lines, Perpendicular Lines, Division of Line Segment	21-24	15. Drawing of Solid Figures	97-98
7. Geometrical Figures	25-40	16. Tools and Equipments of Various Trades	99-115
8. Lettering	41-47	17. Projections	116-120
9. Dimensioning Methods	48-54	18. Orthographic Drawing of Simple Fasteners	121-131
		19. Drawing Details of Assembly Drawing	132-139
		20. Reading of Fabrication Drawing	140-143

MODEL PAPERS (FOR ANNUAL A.I.T.T. EXAM)

Model Papers 1 to 8 [Annual A.I.T.T. Exam (NSQF Level 3/4/5)] 1-19

2nd Year

Chapter	Pages		
1. Trade Related Signs and Symbols	3-17	7. 3-Phase Induction Motor	38-42
2. Electronic Components	18-22	8. Alternator	43-45
3. Electric Wiring and Earthing	23-25	9. Winding	46-52
4. D.C. Machines	26-31	10. Control Panel	53-56
5. Transformers	32-34	11. Distribution of Power	57-61
6. Illumination	35-37	12. Domestic Appliances	62-63

NEW PATTERN SOLVED ASSIGNMENT

Appendix 1: Assignment/Test (Solved) [For A.I.T.T. Exam 2nd Year (Chapter 1 to 6)]	A.1-A.7
Appendix 2: Assignment/Test (Solved) [For A.I.T.T. Exam 2nd Year (Chapter 7 to 12)]	A.8-A.14