

Preface to Latest Edition (NSQF Level – 4 Compliant)

Directorate General of Training (DGT) under the Ministry of Skill Development and Entrepreneurship (MSDE) is the apex body in the country as regards planning, formulating and prescribing norms, standards, procedures and guidelines in respect of various vocational training schemes of which Craftsmen Training Scheme (CTS) implemented in ITI's is the most important and wide-spread throughout the country. Prescribing well designed curriculum and putting in place appropriate assessment and certification procedure are among the vital aspects of vocational training.

Refrigeration and Air Conditioning Technician (sector: Capital Goods and Manufacturing) is one among the most popular ITI designated trades and is of two-year duration. DGT in September 2022 issued latest revised version (version 2.0 of July 2022) of the syllabus, which came into force with 2022 session of admission in ITI's. The main significant change has been that its NSQF level has been revised from five to four. Besides this some rationalisation / rearrangement of certain topics has been done, e.g. the topic "Car Air Conditioning" has been rightly juxtaposed with the second year topic of Mobile AC (Bus, Train).

This book has been prepared and re-designed taking due note of latest changes. Besides covering all necessary topics related to trade theory, as hitherto, each chapter is supplemented by an appropriate set of short Q - Ans. and MCQs with key. Further, 12 model papers (6 each for first and second year) with key and essential explanatory notes have been incorporated which, we believe, should be of immense help to the trainees to prepare for the final trade test with understanding of trade theory subject, and with confidence.

We sincerely hope that trainees will find this book very much helpful to adjust with the latest changes in syllabus related to Refrigeration and Air Conditioning Technician trade. We would welcome suggestions for further improvement of this book in its subsequent editions.

— Author

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NSQF Level – 4 compliant competency based curriculum for Refrigeration and A.C. Technician (2022 Syllabus) (ix–xiii)

Ist Year

1. Introduction 3–12

History of Refrigeration and Air Conditioning, Job Role, Employment Opportunities, General Safety Precautions, First Aid, Types of Injury and their Prevention, Necessary Treatments, First Aid Training Refrigeration Tools, List of General Tools Required in a Workshop, Special Tools for Refrigeration Workshop, Equipment Required In Refrigeration Workshop, List of Material Required, Tube Cutter, Flaring Tool, Swaging Tool, Tube Bender, Refacing Tool, Flexible Charging Line, Charging Kit, Pinching Tool, Vacuum Pump, Portable Charging Panel, Pressure Gauge, Halide Torch, Electronic Leak Detector, Growing of Technicians.

Assignment/Test—Solved 11–12

- Multiple Choice Questions
- Key to Multiple Choice Questions
- Short Q.-Ans. (Helpful in solving MCQs)

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- Multiple Choice Questions
- Key to Multiple Choice Questions
- Short Q.-Ans. (Helpful in solving MCQs)

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Assignment/Test—Solved 86–89

- Multiple Choice Questions
- Key to Multiple Choice Questions
- Short Q.-Ans. (Helpful in solving MCQs)

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- Multiple Choice Questions
- Key to Multiple Choice Questions
- Short Q.-Ans. (Helpful in solving MCQs)

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Assignment/Test—Solved 126–130

- Multiple Choice Questions
- Key to Multiple Choice Questions
- Short Q.-Ans. (Helpful in solving MCQs)

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- Multiple Choice Questions
- Key to Multiple Choice Questions
- Short Q.-Ans. (Helpful in solving MCQs)

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- Multiple Choice Questions
- Key to Multiple Choice Questions
- Short Q.-Ans. (Helpful in solving MCQs)

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- Multiple Choice Questions
- Key to Multiple Choice Questions
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- Multiple Choice Questions
- Key to Multiple Choice Questions
- Short Q.-Ans. (Helpful in solving MCQs)

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- Key to Multiple Choice Questions
- Short Q.-Ans. (Helpful in solving MCQs)

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- Multiple Choice Questions
- Key to Multiple Choice Questions
- Short Q.-Ans. (Helpful in solving MCQs)

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Assignment/Test—Solved 216–217

- Multiple Choice Questions
- Key to Multiple Choice Questions
- Short Q.-Ans. (Helpful in solving MCQs)

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Assignment/Test—Solved 230–232

- Multiple Choice Questions
- Key to Multiple Choice Questions
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- Multiple Choice Questions
- Key to Multiple Choice Questions
- Short Q.-Ans. (Helpful in solving MCQs)

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- Multiple Choice Questions
- Key to Multiple Choice Questions
- Short Q.-Ans. (Helpful in solving MCQs)

Appendix : 1st Year Model Papers 1 to 6 (Annual A.I.T.T. Exam – NSQF Level – 4) ... 262–282

2nd Year

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- Multiple Choice Questions
- Key to Multiple Choice Questions
- Short Q.-Ans. (Helpful in solving MCQs)

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- Multiple Choice Questions
- Key to Multiple Choice Questions
- Short Q.-Ans. (Helpful in solving MCQs)

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- Multiple Choice Questions
- Key to Multiple Choice Questions
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- Key to Multiple Choice Questions
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