

Preface to Revised Edition

As per NSQF Level 4 Compliant Competency based Curriculum

Directorate General of Training (DGT) under the Ministry of Skill Development and 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. Presently curricula of all CTS trades stand revised, updated and made NSQF compliant at appropriate levels. The curriculum for Electronics Mechanic trade has been fixed at level 4 in the Electronics and Hardware sector.

Relying entirely on multiple choice questions for trade theory question papers is already a well-established practice. Hence the utility of a concise Q-Bank can be well realised and understood.

Keeping the recent developments and current status in view, this Q-bank has been prepared strictly in accordance with the curriculum prescribed by DGT effective from September 2022 session, covering trade theory subject matter sequentially through different Modules, each containing fairly large number of multiple choice questions on All India Trade Test pattern, supplemented by latest solved AITT question papers.

It is trusted that this concise Q - Bank will be of immense help to the trainees to prepare for Annual All India Trade Test.

Besides the ITI trainees in Electronics Mechanic trade, candidates appearing for various competitive examinations / interviews for jobs in many public, private, state and central government enterprises should find this book of great help. Several enterprises prescribe ITI level as necessary qualification for recruitment. Railway Recruitment Board (RRB), is among a few such examples.

Suggestions from our esteemed readers for further improvement of this volume are always welcome.

–Author

Contents

1st Year

1. Introduction	2	14. Transistors	33
2. Fitter Theory	4	15. Amplifiers	35
3. Electrical Basics	7	16. Oscillators	40
4. Electrical Cables	9	17. Wave Shaping Circuits	42
5. Measuring Instruments	11	18. Power Electronic Components	44
6. Cells and Batteries	13	19. MOSFET and IGBT	46
7. CRO (Cathode-Ray-Oscilloscope)	16	20. Opto Electronic Components	47
8. Soldering and Desoldering	18	21. Basic Gates	48
9. Active and Passive Components	19	22. Combinational Logic Circuits	50
10. Magnetism and Electromagnetism	24	23. Flip-Flops and Counters	51
11. Power Supply Circuits	26	24. Operational Amplifiers	52
12. Transformers and 3-Phase System	29	25. Timer Circuits	54
13. Regulated Power Supplies	31		

2nd Year

1. Electronic Cables and Connectors	2	12. Microprocessors and Microcontrollers	23
2. Computer Hardware and Networking	3	13. Sensors, Transducers and Applications	24
3. Computer OS	5	14. Fibre-optic Communications	26
4. Operating Windows and MS Office	7	15. 7-Segment Display, Registers and Memory	27
5. SMD Technology	8	16. Digital Panel Meter	28
6. Protection Devices	9	17. SMPS (Switch Mode Power Supply)	29
7. Electrical Motors	10	18. UPS (Uninterruptible Power Supply)	31
8. Radio Wave Propagation and Antennas	12	19. Solar Power	33
9. Modulation and Detection	14	20. Cell Phones	35
10. Radio Receivers and Transmitters	16	21. LED Lights	37
11. Digital and Satellite Communications	21	22. LCD and LED TV Receivers	38

Up-to-date Exam. Papers (with key).....1-83