

**PRASAR BHARATI
STAFF TRAINING INSTITUTE (TECHNICAL)
ALL INDIA RADIO & DOORDARSHAN
KINGSWAY : DELHI - 110 009.**

By FAX
Fot Sent
J. S. Jaiswal
V.P. ARTEE
WEST ZONE
FAX No
022-28821867

No. STI(T)/General/2008/

Dated 25.08.2008

The Director General,
(By name Shri H.R. Singh, E-in-C),
All India Radio,
Akashvani Bhawan,
NEW DELHI - 110 001.

Sub: Change of pattern for Helpers to Technician exam.

Sir,

Please find enclosed a letter received from ARTEE on the above subject. Basically the suggestion is for having two parts of the present examination, one common for both AIR & Doordarshan Helpers and one separately for AIR & Doordarshan Helpers. This pattern is followed in the Senior Technician to Engineering Assistants examination.

Their appears to be merit in the above suggestion. It is therefore suggested that the examination may comprise of three parts. Paper I may have questions or present from electrical engineering and Paper II may be either from Radio Engineering or TV Engineering and Paper III of practicals.

If the Directorate agrees to the above proposal, suitable instructions may kindly be issued to STI(T) in this regard.

Yours faithfully,

ok 54-
G.C. RAI
Chief Engineer (Tech)

Enc: Copy of letter from ARTEE.

- Copy to*
1. The Directorate General, (Kind attn: Shri D. Ray, E-in-C),
Doordarshan, Doordarshan Bhawan, Copernicus Marg,
New Delhi - 110 004 for kind information and comments if any.

[Handwritten signature]

Pl. Handover to MR Gajjar E.A.



ASSOCIATION OF RADIO AND TELEVISION ENGINEERING EMPLOYEES (ARTEE)

(Registered & Recognised by Govt. of India Regn. No.923/67)
Zonal Office (WZ), Post Box No. 11228, Mumbai - 400 020.
Central Office Post box No. 422, New Delhi - 110 001
TELE FAX- 022 28886072

ARTEE

Ref.: ARTEE (WZ)/08/03

Date : 12-08-2008

To,
The Chief Engineer, (Sh G.C.Rai sir)
STI (T), AIR & DD,
New Delhi.

Sub:- Suggestions for Helper to Tech exam pattern.

Respected Sir,

Our departmental competitive exam pattern normally contains two parts. One part contains common question and other part contains PART "A" for AIR questions and PART "B" for DD questions. This type of exam pattern followed for Sr. Tech to EA as well as SEA to AE departmental examination.

The same pattern was not followed for Helper to Technician examination.

Sir, in our department Helper cadre is non transferable cadre. Once he join in AIR, DDK or LPTV, he works in the same office till retirement. Although, he is the most experienced person in the office and having lots of practical experience of working during breakdown but he cannot compete during departmental exam because of common exam paper pattern.

Sir, in this connection I would like to give you some suggestions.

1. Helper to Technician exam paper should be of TWO parts.
Part I for Common questions. For 40 Marks.
Part II should contain two sections. For 60 Marks each.
Section "A" for AIR (should contain AIR setup base practical questions)
Section "B" for DD (should contain DD/LPTV setup base practical questions)
2. Language and question level should be easy by keeping in view their IQ level.
3. Model and old solved question paper set should be put on STI (T) website.
4. Exam result should be sent to their respective stations.

Sir, these are the few suggestions, if your good self feels, are genuine, then may please be considered. Helper cadre in our department is the most neglected (financially) cadre. At least by this way we can help them to come up.

Anticipating positive action from your good self.

Thanking You,

Yours truly,


Y.S. Tahasildar
Vice President, ARTEE, W/Z
ytsusa@yahoo.com, 0986924 6989

Copy to:

1. Chief Engineer, W/Z. By name Sh. S.N. Guptaji for necessary ~~confirmation~~
2. Chief Engineer, W/Z By name Sh. V.C. Jain sir for necessary ~~confirmation~~
3. President ARTEE, Sh. Anilkumar S. for necessary follow up

RESTRUCTURED SYLLABUS FOR DEPARTMENTAL EXAMINATION [Revised - 2008]

(for promotion of Helper to the grade of Technician)

The examination pattern consist of

- i) Written Test consisting of one paper of 3 hours duration carrying 200 marks
- ii) Practical Test of 3 hours duration carrying 100 marks

i) Written Test- 200 marks

Part I : BASIC PRINCIPLES OF ELECTRICITY AND ELECTRONICS-(100 MARKS)

1. Concepts of voltage, Current, Power Energy and their units.
Ohms law and its applications.
2. Identification & functioning of components like resistors, inductors, capacitors and their colour codes. Voltage and power ratings, series and parallel combination of components.
3. Different types of batteries, their charging, trickle charging, care and maintenance. Solar cells/panels.
4. DC supply, AC single phase and three phase supply, regulation, power factor.
5. Electrical symbols, standard wire gauge, fuses, switch-gears, earthing practices, domestic wiring, meters like standard voltmeters, Ammeters, multi-meters, meggers etc.
6. Functioning of AC and DC motors, starters for motors, Star/Delta connection. Speed regulation, rating of motors and basic maintenance.
7. Working of transformers, turns ratio, Primary/Secondary

voltage, tapings on windings, transformer cooling,

transformer oil testing and its filtering.

8. Identification and basics of active elements like various types of vacuum tubes, semi conductor devices and transistors. Circuit configurations of transistors and comparison with valve circuits. Basics of FET, SMPS and digital basics.
9. Different types of Amplifiers, Rectifiers, Oscillators their characteristics and application.

Part II - SOUND BROADCASTING- (100 marks)

1. Broadcast chain from microphone to studio output including
Announcer console pre-amplifier, Programme Amplifier,
Switching Console, Equalising Line Amplifier etc.
Maintenance of studio equipment
2. Knowledge of control of programmes in terms of level
and quality, monitoring devices such as : VU meter,
headphone, loudspeaker, Monitoring amplifier etc.
3. Basic of Audio Tape Recorders
4. Outside broadcast set up; tools, equipment and precautions.
5. Broadcast chain for AIR transmitter from input to antenna at
transmitter site. Functions of important components and stages
like limiter, AF stages, RF stages etc and other ancilliary equipments.
6. FM transmitter and its associated equipments.
7. Various types of aerials and feeders used in AIR.
Their characteristics and functions.
8. Studio transmitter link and receiving equipment, Radio Networking Terminal
9. Servicing procedures for Radio, tools and equipments
used for servicing.
10. Concept of dB, dBm, VU; Frequency Response; Distortion
and Noise Level.
11. Attenuators, pads, multiple pads, repeat coils, Equalisers and filters.
12. Different type of microphones and their applications.

13. Basics of Satellite communication
14. Petrol and diesel generators their working principles; functions of various components and maintenance.
15. Identification of components and functioning details in respect of air-conditioning plants including windows air-conditioners; Charging of gas, leak detection and purging.
16. Safety precautions, fire fighting and first aid practices as given in AIR Manual of Safety precautions.

Part-II-B: TV BROADCASTING- (100 marks)

1. Basic of Video Tape Recorders
2. Outside broadcast set up; tools, equipment and precautions
3. Various types of aerials and feeders used in Doordarshan. Their characteristics and functions.
4. Studio transmitter link and receiving equipment, TVRO and DRS
5. Working knowledge of studio chain in TV studio from camera to studio output.
6. Basic principles of lighting in TV studio. Care and handling of lighting equipment.
7. Facilities in TV OB Van, laying cables for audio/ video, power supply and microwave links. Handling and care of ENG and EFP equipments and other studio equipments.
8. Broadcast chain for TV transmitter from input to antenna.
Functions of important units of Low Power Transmitters (LPTs/VLPTs),
Medium Power and High Power Transmitters, (VHF/UHF)
9. Servicing procedures for TV receiver, tools and equipments used for servicing.
10. Concept of dB, dBm, VU; frequency Response; Distortion and Noise Level.
11. Attenuators, pads, multiple pads, repeat coils Equalisers and filters.
12. Different type of microphones and their applications.

13. Basics of Satellite communication
14. Petrol and diesel generators their working principles; functions of various components
and maintenance.
15. Identification of components and functioning details in respect of air-conditioning plants including windows air-conditioners; Charging of gas, leak detection and purging.
16. Safety precautions, fire fighting and first aid practices as given in AIR Manual of Safety precautions

Paper III : Practical Test. (100 marks)

Testing of skills in

1. Soldering
2. Care & use of various mechanical and electrical tools used in
our networks.
3. Operation, maintenance and routine measurements on air
conditioning plants.
4. Operation and maintenance of Diesel Generators.
5. Electrical wiring, replacement of switches, fuses and
other components.
6. Use of various meters like multimeter, sling Psychrometer,
Tachometer, hydrometer, Anemometer, Halide leak detector and
various pressure gauges.
7. Use of Test instruments such as insulation tester,
Transistor tester and IC tester & Oscilloscope.
8. Dismantling and assembling of electrical/electronic
equipment.
9. Maintenance of lead storage batteries.
10. Use of fire fighting equipment and safety gadgets.
11. Ability to read technical pamphlets.