

MAHARASHTRA STATE BOARD OF VOCATIONAL EDUCATION EXAMINATION, MUMBAI - 51

1	Name of Course	Certificate Course In Maintenance of T.V. & D.T.H. (301112)																																									
2	Max.Nos. of Student	25 Students																																									
3	Duration	6 Month																																									
4	Type	Part Time																																									
5	Nos Of Days / Week	6 Days																																									
6	Nos Of Hours /Days	4 Hrs																																									
7	Space Required	Theory Class Room – 200 sqft Workshop – 400 sqft																																									
8	Entry Qualification	S.S.C. Passed																																									
9	Objective Of Syllabus/ introduction	After completion the participant would be able to 1. Repair Television. 2. Identify parts and learn terminology used for DTH system. 3. Assemble the parts of mini-dish and install independently at customers premises. 4. Guide the customers to operate the DTH systems installed in their residence 5. Learn to have effective interaction with custom																																									
10	Employment Opportunity	Self Employment / May get job in Establishment																																									
11	Teacher’s Qualification	Diploma in eloelectronics , I.T.I. N.C.V.T. (Electronics)																																									
12	Training System	<table><tr><th colspan="7">Training System Per Week</th></tr><tr><td>Theory</td><td colspan="2">Practical</td><td colspan="4">Total</td></tr><tr><td>6 Hours</td><td colspan="2">18 Hours</td><td colspan="4">24 Hours</td></tr></table>							Training System Per Week							Theory	Practical		Total				6 Hours	18 Hours		24 Hours																	
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Theory – I

T.V. & D. T. H.

1. Electrical and personal safety, dangers and preventions.
2. Explain the working principle of colour TV using block diagram.
3. Explain the need and working principle of each block
4. Detailed explanation of power supply and high voltage generation section
5. Explanation of PT , various voltages required for PT
6. Basic satellite communication,.
7. Types of satellite & its orbits, uplinks and down links, Frequency spectrum,
8. Broadcast centers, area covered, polarization, EFC, symbol rate,
9. BER, MER, C/N, etc. Specification & parts of coaxial cable,
10. Impedance and specification Multi-dwelling unit design, headed amplifier,
11. Line amplifier, cascaded in/out multi switch, tap, splitter.

Practical – I

T. V. Repairing

1. Practice procedures for safety and health hazards measures
2. Installation of a TV receiver Check the SMPS for various output voltages Identify different stages and special
3. components Check the EHT section for various faults by using step by step method Check the tuner section for various tuning
4. problems Check the vertical and Horizontal section for various oscillations and drive problems.
5. Simulate faults related with the micro controller and I2C sections .
6. Fault finding in remote control
7. TV kit replacement with suitable yoke system (vertical and horizontal deflection coils)

Practical No – II

DTH Assembly

1. Name the various mini-dish components and their functions.
2. Chronology to assemble the various parts of minidisk.
3. Various types of connectors and cables, its specifications and connection procedure.
4. Identify and use different tools and equipments used in DTH installation procedure & cabling procedure.
5. Site selection, installation mounting tracking for azimuth and elevation angles using SAT meter.
6. Laying cable, connecting auxiliary equipments Activating, setting of IRD/DIGICOM/DIGIBOX

Resources :

1. Television of different makes.
2. Technicians tool kit
3. Soldering iron
4. Digital Multimeter
5. Isolation transformer
6. Pattern generator (COLOUR)
7. Infra Red remoter control tester
8. Complete Assembly of mini dish
9. IRD / Digibox /digicom along with all channel package
10. Special tools as compression tools, preparation tools and other tools required time to time etc.
11. Power drill machine Hammer type bidirectional rotation
12. SAT Meter
13. Co lour TV
14. Inclano meter
15. Compass
16. Practice wall comprising bricks, concrete etc.
17. LNBF (Universal, dual, quad, quattero)
18. Headed amplifier, line amplifier, cascaded 2 in 4 out multi-switch, tap, splitter.