

MAHARASHTRA STATE BOARD OF VOCATIONAL EDUCATION EXAMINATION, MUMBAI

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|--------|-------------------------------------|--|------------|------------------------------------|-------|-------|------------|-------------|--------|-----------|-------|-------|--------|--------|
| 1 | Name of Syllabus | CERTIFICATE COURSE IN DOMESTIC APPLIANCES MECHANIC (302123) | | | | | | | | | | | | |
| 2 | Max. Nos of Student | 25 Students | | | | | | | | | | | | |
| 3 | Duration | 6 Month | | | | | | | | | | | | |
| 4 | Type | Part Time | | | | | | | | | | | | |
| 5 | Nos Of Days / Week | 6 days (24 Hrs / week) | | | | | | | | | | | | |
| 6 | Nos Of Hours /Days | 4 hrs. | | | | | | | | | | | | |
| 7 | Space Required | Workshop = 400 sqfeet Class Room = 200 sqfeet TOTAL = 600 sqfeet | | | | | | | | | | | | |
| 8 | Entry Qualification | 8 th Passed | | | | | | | | | | | | |
| 9 | Objective Of Syllabus/ introduction | To interpret information about a particular domestic appliances. To test and identify a defect in domestic appliances. To repair & maintain domestic appliances. | | | | | | | | | | | | |
| 10 | Employment Opportunity | Self Employment / May get job in Establishment | | | | | | | | | | | | |
| 11 | Teacher’s Qualification | Diploma in electrical , I.T.I. N.C.V.T. (electrical) | | | | | | | | | | | | |
| 12 | Training System | Training System Per Week <table><tr><td>Theory</td><td>Practical</td><td>Total</td></tr><tr><td>6 hrs</td><td>18 hrs</td><td>24 hrs</td></tr></table> | | | | | | | Theory | Practical | Total | 6 hrs | 18 hrs | 24 hrs |
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| 6 hrs | 18 hrs | 24 hrs | | | | | | | | | | | | |
| 13 | Exam. System | Sr. No. | Paper Code | Name of Subject | TH/PR | Hours | Max. Marks | Mini. Marks | | | | | | |
| | | 1 | 30212311 | DOMESTIC APPLIANCES | TH-I | 3 Hrs | 100 | 35 | | | | | | |
| | | 2 | 30212321 | Basic Electrical | PR-I | 3 Hrs | 100 | 50 | | | | | | |
| | | 3 | 30212322 | Maintenance of Domestic Appliances | PR-II | 6 Hrs | 200 | 100 | | | | | | |
| | | | | TOTAL | | | 400 | 185 | | | | | | |

Theory - I - DOMESTIC APPLIANCES

1. Electrical safety , Rescue a person who is in contact with live wire. Treat a person for electric shock/injury.
2. Introduction to Electricity, Conductors and types of conductors, Insulators and types of insulators , Crimping & crimping tool, Soldering
3. Define simple electrical terms like voltage, current, resistance and their units.
4. Introduction, Importance of maintenance, Common faults on electrical side as well as mechanical side, Method of removing the faults & Importance of preventive maintenance.
5. Types of conductors, their properties and use in electricity, Types of insulators, their properties and use in electricity. Uses of common instruments like Voltmeter, Amp Meter, Multimeter, Cable fault locator, Growler, etc.
6. Study of winding Principles, construction, fault finding, replacement of
 - a. Toaster b) Iron c) Washing Machines d) Vacuum Cleaner e) Dish Washer f) Fan g) Mixer & Grinder h) Blender i) Oven j) Heater k) Convector l) Micro Wave oven m) Geyser n) Water lifting pump. o) Automatic water level controller p) Desert cooler.
7. Study of thermostatic switches. Precautions to be observed while checking the appliances, Checking the condition of mechanical parts and their replacement, Balancing the rotating parts(magnetically and mechanically).

PRACTICAL - I - Basic Electrical

1. Electrical safety practice Rescue a person who is in contact with live wire.
2. Treat a person for electric shock/injury.
3. Prepare Terminations Skinning Different types of cable ends
4. Make various joints in cable Crimping cable ends.
5. Method of testing the insulation resistance.
6. Soldering the cable lugs Simple electrical connections using resistance, voltmeter, and ammeter, Multimeter

PRACTICAL - II Maintenance of Domestic Appliances

- 1 Method of dismantling of electrical appliances like Mixture, Grinder, Blender, Oven, Heaters, Heat Convector, Microwave, Geyser, Toaster, Iron (Thermostatic & cord less), Washing Machines(semi automatic & fully automatic)Vacuum Cleaner, Dish Washer, Fan & Micro Wave,
- 2 Methods of checking the condition of appliances.
- 3 Testing and repairing of protective device. Test and repairing of controlling device.
- 4 Method of locating the faults in appliance i.e. open circuit, short circuit, earth leakage, etc. Overhauling, Oiling and greasing the rotating parts of the appliances and their replacement. Method of increasing the insulation resistance.
- 5 Study of MCB,ELCB and Earth leakage circuit breaker.
- 6 Method of baking the varnishing. Testing the armature (Growler test).

LIST OF TOOLS & EQUIPMENTS

| Sr. No. | Name of Items | No.s Required |
|---------|--|---------------|
| 1. | Measuring Tape Steel 100cm | 10 Nos. |
| 2. | Rule Steel 300cm | 10 Nos. |
| 3. | Screw Driver heavy duty 200mm insulated thick stem | 10 Nos. |
| 4. | Screw Driver heavy duty 250mm with insulated thick stem handle | 10 Nos. |
| 5. | Plier Insulated combination 200 mm | 10 Nos. |
| 6. | Knife double blade electrician 100mm | 10 Nos. |
| 7. | Pincer 150mm | 10 Nos. |
| 8. | Scriber 150mm x 4mm | 10 Nos. |
| 9. | Punch center 150mm x 8mm | 10 Nos. |
| 10. | Hammer ball pien 0.75kg with handle | 10 Nos. |
| 11. | Hammer cross pien 115gms with handle | 10 Nos. |
| 12. | Saw Tenon 250mm | 10 Nos. |
| 13. | Firmer chisel wood 12mm | 10 Nos. |
| 14. | Gimlet 6mm | 10 Nos. |
| 15. | Bradawl 100mm | 10 Nos. |
| 16. | Wire stripper 150 mm | 10 Nos. |
| 17. | Heat sink plier | 10 Nos. |
| 18 | Voltage sensor (pencil type)/ Electronic Tester | 1 No |
| 19 | Screw Driver Kit (Set of six blades with common insulated handle with neon tester) | 1 No |
| 20 | Plier insulated 150 mm | 1 No |
| 21 | Multimeter | 1 No |
| 22 | Soldering iron,15W,230 V (temperature controlled) | 1 No |
