

REPAIR AND MAINTENANCE OF CELLULAR PHONE

Name : REPAIR AND MAINTENANCE OF CELLULAR PHONE

SECTOR : ELECTRONICS

CODE : ELC207

Entry qualification : 1. 8th std pass with age at least 14 years.
2. MES Modules on Basic Electronics -Repair and Maintenance of Power supply, Inverter and UPS

DURATION : 210 hrs

TERMINAL COMPETENCY : Candidate will be able to repair 2G and 3G cell phones

CONTENTS:

Practical Competencies	Underpinning Knowledge (Theory)
<i>Practice procedures for safety and health hazards measures</i>	<i>Electrical and personal safety, dangers and preventions</i>
Operation and setting of cell phone	Introduction to various types of mobile handsets, their description, features & how to use these features. Identify the keys and their uses.
<i>Identify various components of mobile handsets</i>	Explaining of various features of mobile phones and methods of using the same.
Replace faulty parts with new parts of mobile phone that can be done without use of soldering	Fault finding and trouble shooting
Test the battery and battery charger with multimeter.	Identify the components used in a cell phone
Testing of Mic, speaker and vibrator	Function of Mic, speaker and vibrator
Soldering and desoldering of various SMD components and select suitable temperature for use.	SMD soldering methods
Soldering and desoldering of BGA Ics.	Identify BGA Ics.
Check track continuity and use jumpers for track problems.	Identify various blocks and their functions
Apply proper flux and cleaning the cell phone	Use of various solders , flux and cleaning agents.
Test and rectify the problems in antenna and antenna switch	Use of antenna and antenna switch
Identify the fault and test the display interface circuits.	Functions of display, CPU, memory
Unlock and lock various functions	Various locks used in cell phone
Identify the faults of Network section and voice section and rectify them.	Functions of the IF section, COBBA section and PA section. Complete knowledge of Block Diagram, circuit diagram, i.e., Power Section On/off circuit Net Section Charging Section Software Section

Rectify the faults related to SIM and SIM connector	SIM and SIM related problems of GSM & CDMA PHONES
Rectify the faults in Camera and camera interface circuits	Use of computer for cell phone servicing – cell phone software
Identify and Rectify the faults in Bluetooth circuits Use of anti-static mats	Camera phones its constructional details and working Bluetooth and other wireless circuits. Flashing and its need- precautions to be taken while flashing
Complete hardware and software knowledge of PDA and multimedia handsets, Window based handsets.	Knowledge of downloading of add-on software, ring tones, wall papers, themes, etc. on non-multimedia and multimedia handsets, window based handsets.

RESOURCES (for a batch of 20 trainees):

1. SMD rework station - 10 Nos.
2. Soldering station 6V/10W - 10 Nos.
3. Magnifying lens with illumination- 5 Nos.
4. BGA soldering kit - 10 Nos.
5. Computer with Flashing Unit - 5 Nos.
6. Tweezers (assorted size and shapes) – 10 nos.
7. MULTIMETER (Digital) – 4 nos.
8. ANTI-STATIC PAD
9. Software compatible with different types of handsets.
10. Screw drivers assorted size and shapes (TROX) for cell phones
(Every trainers should have his own tool kit – set of screw drivers, blade, soldering iron, multimeter, set of pliers, cutting, nose, combination pliers)